GEOTHERMAL DEVELOPMENT ACTIVITIES

(Exploration Phase)

Kilauea Middle East Rift Zone

Puna District, Island of Hawaii

SUPPLEMENTAL DATA

for

AUTHORITY TO CONSTRUCT APPLICATION

True/Mid-Pacific Geothermal Venture

January, 1989

TRUE GEOTHERMAL ENERGY COMPANY

895 WEST RIVER CROSS ROAD

Phone (307) 237-9301
P.O. Box 2360
Casper, Wyoming
82602

April 11, 1989

Mr. Dennis Lau, Chief
ENVIRONMENTAL PERMITS BRANCH (EPHSD/EP8)
Department of Health
P.O. Box 3378
Honolulu, Hawaii 96801

RE: Your letter of February 6, 1989; Application for Authority to Construct (ATC) No. A-815

Dear Mr. Lau:

The following information is provided in response to the referenced letter:

1. Estimate of impacts of trace elements in geothermal fluid.

A typical well will require about 60 days to drill and complete. During the last 20 days of drilling, geothermal fluids may be brought to the surface. The impact on air quality due to emissions of trace element/air toxics will be extremely small, much below EPA threshold limit values. Even under worst case conditions of venting, the ambient air quality impact due to trace elements is practically nil. This conclusion was reached after applying air quality modeling results to estimated emissions of trace elements from geothermal brines. By assuming brine chemistry similar to HGP-A and their emission rate of 2% of total produced brine, an analysis of trace elements can be made. A discussion of this is included in Enclosure 1, Report of Estimates of Air Quality Impacts During Construction of Geothermal Wells. Table 4 in this document shows that all trace elements are far below threshold limit values even under venting conditions.

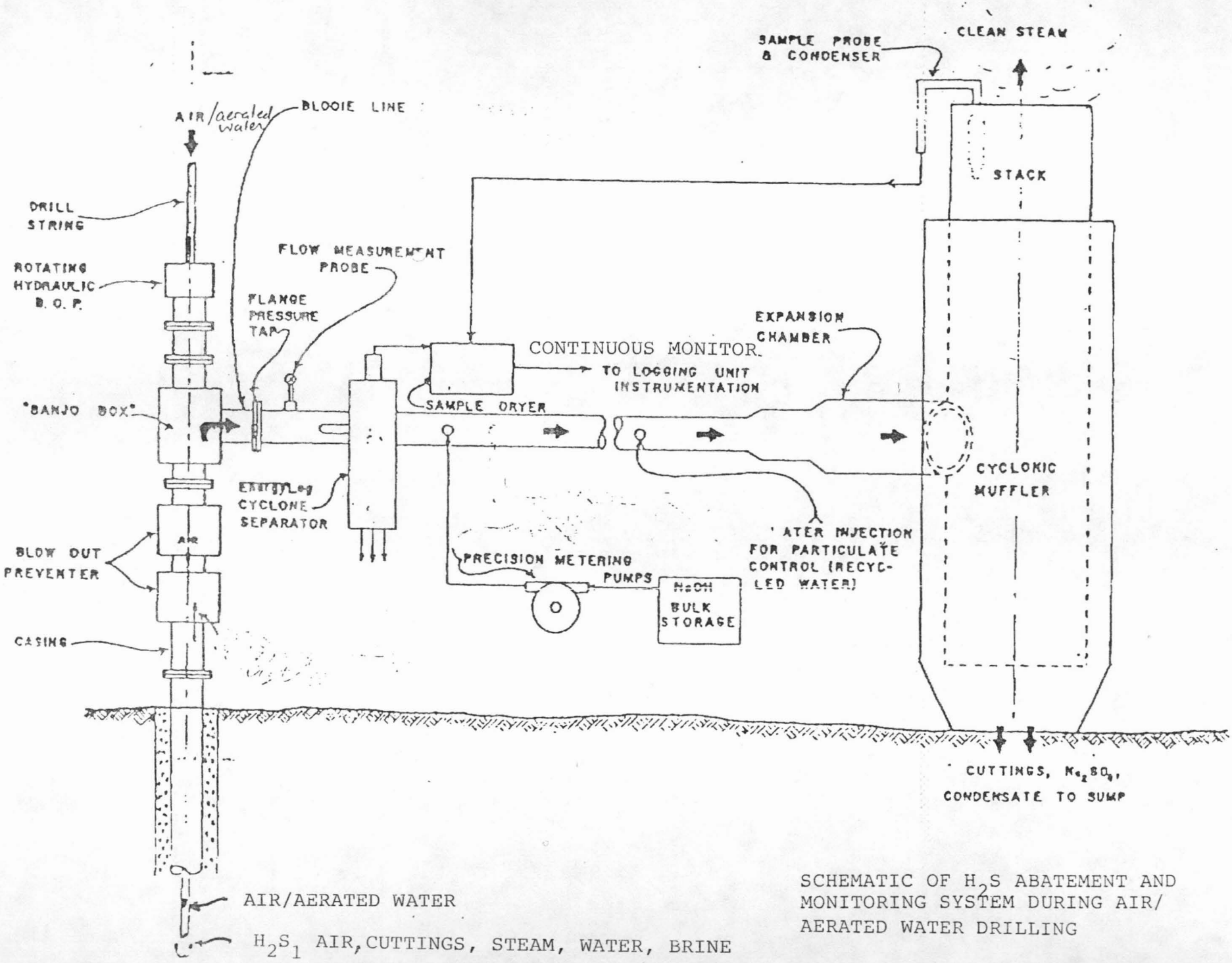
2. BACT for particulate emissions during well drilling.

Particulate emissions are anticipated to occur during the later stages of drilling a geothermal well. During this stage of operations, air or an aerated water system is used as a circulating medium replacing the conventional mud system. As a result, small amounts of aerosol particulates may be emitted when the drilling fluid,

plus any produced brine reaches the surface. As shown in Figure 1, the drilling returns consist of cuttings, air/aerated water, produced brine, and non-condensible gases. They are conducted from the wellhead into a large diameter pipe called a blooie line and then discharged into a cyclone or tangential muffer/separator. This equipment separates the drill cuttings and liquid drilling returns from the vapors by centrifugal force. Any solids or dust entrained in the liquid are forced to the outside wall and drop to the bottom funnel shaped outlet. Air or steam travels downward, below the inlet point, and then travels upward to exit the stack. The muffler/separator also serves to reduce the noise associated with steam production.

During actual drilling, about 200-250 gals/min. of drilling returns are discharged into the muffler/separator and of this amount about 100 gals/min. will be geothermal brine, the balance being the 60-150 gals/min. of water injected into the wellbore during air drilling. The brine flow is limited because the well remains relatively cool during drilling and the hydrostatic pressure of the circulating water is high enough to hold back all but a small amount of produced fluid from entering the wellbore. The other factor that keeps discharge rates low is that the drill pipe in the hole takes up 30% of hole area.

The muffler/separator is widely used by the industry and is considered to be BACT for particulate emissions while drilling with an air or aerated water system. Emissions from aerosol liquid particulates are based on a 2% aerosol escape rate for 50,000 kg per hour of geothermal fluid having a desolved solids concentration of 20,000 mg/kg. Thus, emission rates of 20 kg/hr. (or 44 lbs/hr.) would be anticipated during the air drilling phase if the well were allowed to flow at its fully opened rate. However, the brine flow rate during drilling with air will be significantly lower than the fully opened flow due to the hydrostatic pressure of the circulating water through the drill pipe which would hold back most of the geothermal fluid from the production formation. In addition, the brine discharge rate



SCHEMATIC OF H_2S ABATEMENT AND MONITORING SYSTEM DURING AIR/ AERATED WATER DRILLING

Figure 1

is further reduced by the presence of the drill string in the wellbore which occupies 30% of the wellbore area. Disregarding the brine flow limiting effect of the hydrostatic pressure of the circulating water, and calculating the brine flow at a 30% reduction in volume due to the drill pipe, the particulate emissions from the cyclone separator as aerosol droplets would be reduced to 14 kg/hr. (or 31 lbs/hr.). Assuming the brine flow is further limited as stated above to 100 gals/min. the emission rate would be further reduced to 9 kg/hr. (no particulate emissions are anticipated while drilling operations are conducted with a mud circulating system.)

3. The following additional information concerning H2S monitoring and abatement during drilling and well testing is submitted in response to paragraphs 3, 4, and 5 of the referenced letter:

The process for monitoring and abating H2S during well drilling (with air) and during flow testing, as described in the application for Authority to Construct, represents the current industry technology and most efffective practice for this purpose. The procedures used are performed by experienced personnel under contract to the operator. Some of the data provided herein were extracted from process descriptions used in The Geysers Geothermal Field supplemented with additional information from the applicant.

This information is typical of procedures that will be used by True Geothermal Energy Company in conducting drilling operations in the Kilauea Middle East Rift Zone.

a. Operation of the Continuous Monitoring System

Continuous monitoring of H2S concentrations in the blooie line is accomplished with a lead acetate tape instrument upstream and downstream from the chemical injection point in the blooie line. (See Figure 1) Such monitoring will alert personnel when H2S levels approach a level that might require abatement. H2S emissions will be maintained below 8.5 lbs./hr.

The H2S concentration level will be confirmed by taking samples from the blooie line and conducting potentiometric titration or a wet chemical test. The wet chemical test is the most reliable method of determining H2S concentrations. This method is widely accepted in geothermal areas for regulatory compliance purposes. Upon encountering a resource, wet chemical tests will be conducted daily.

A typical H2S monitoring instrument is the Tracor-Atlas 825R detector. It is accepted in the industry and widely used. The H2S detector will be calibrated with standardized known gas concentrations. The instrument has a 1 ppm sensitivity and 5% accuracy. Response time varies with concentration and magnitude of change. At low levels, less than 100 ppm, tens of seconds might elapse to see changes while at high levels or if large changes occur, only seconds are required for the detector to record the changes. All measurements from the continuous monitor are recorded on a permanent log. Figure 2 shows the interior of the mud logging trailer, and provides a brief overview of the H2S monitoring equipment.

b. Steam Flow Rates

The steam flow rate must be measured concurrently with the monitoring of H2S concentrations in order to calculate total H2S emissions in lbs/hr. Described below are methodologies for determination of the steam flow rate, while drilling and while testing.

1) Steam Flow Rate while Drilling with Air or Air/Water mixture.

Determination of mass flow in a two-phase system is extremely difficult. Direct metering is not practical in the blooie line while drilling. Thus in order to arrive at reasonable estimates of H2S emissions, steam flow rates may be determined as follows:

TYPICAL INTERIOR OF MUDLOGGING TRAILER SHOWING H_2S MONITORING EQUIPMENT

EQUIPMENT

1 MUD WEIGHT
Differential pressure transducers provide constant, reliable mud weight measurements which relate to bottomhole pressures and fluid entries.

2 MUD RESISTIVITY
Displays mud resistivity "in" and "out." Helpful in formation fluid entry determination. Identifies potential production zones.

3 PUMP STROKE PANEL
Digital counters and strokes-per-minute meters monitor pumps for lag time determination and fluid control.

4 TOTALIZER GAIN/LOSS
Contains dual digital display for pit level conditions. One display can read any individual pit as well as total volume of all pits. Other display is for gain/loss in total system.

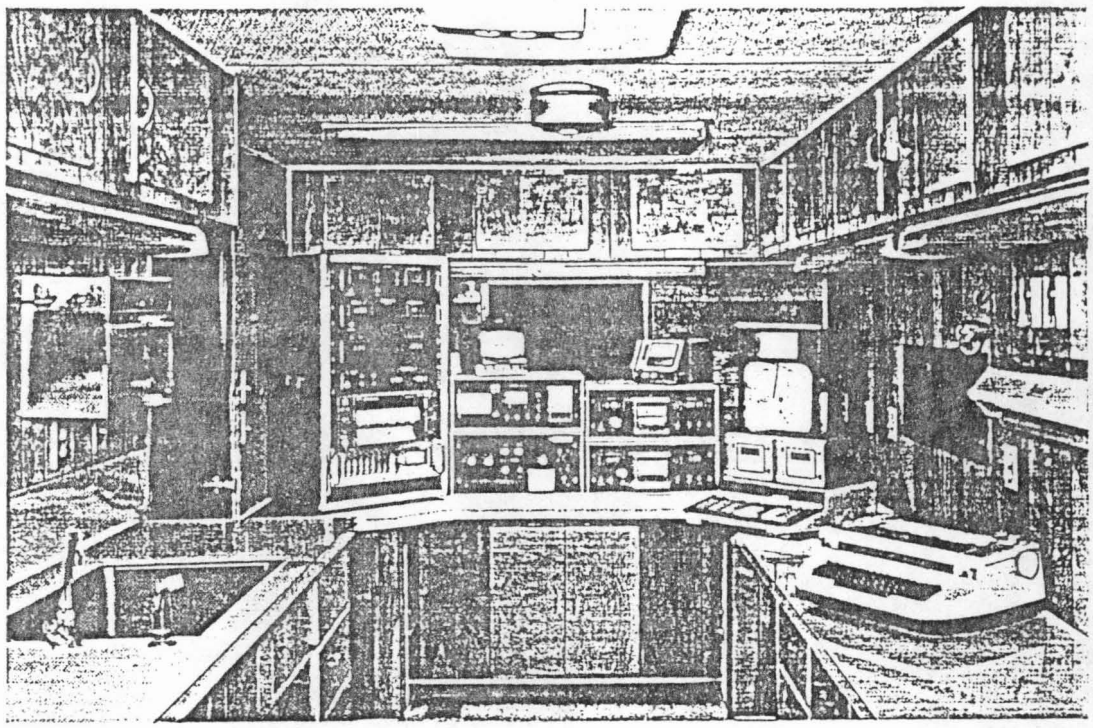
5 CHART RECORDER
Dual channel recorder with variable input flexibility.

6 H_2S AREA MONITORS
Provides up to 8 remote channels for monitoring ambient H_2S conditions around drilling location. Internal alarms (audio/visual) monitor for high and low concentrations as well as any malfunctions.

7 CRT
Cathode ray tube for data and message displays.

8 H_2S PANEL
Continuous lead-acetate tape monitoring device measures H_2S concentrations of 0 - 50 ppm and higher concentrations of 0 - 5000 ppm with dilution. Standard audio alarms in logging unit provide early detection of increased concentrations of H_2S. External alarms are optional and available upon request.

9 CHROMATOGRAPH
Flame-ionization detector to maintain dependability, linearity, sensitivity and accuracy in geothermal drilling environments.
Gas component identification and analysis aids in geochemical evaluation of potential thermal zones.
Four-minute cycle time to identify C_1 through C_5. Optional inert gas identification available upon request.



10 CO_2 DETECTION
Infrared dispersion detector provides accurate and reliable CO_2 concentration measurements with dual sensitivity ranges of 0-5% and 0-15% in standard configuration. Optional specialized analysis equipment for detection of geothermal trace components.

11 PRESSURE
Silicon-chip pressure transducers are used to monitor standpipe and blooie line pressure for steam or other formation fluid entries as well as pressure increases caused by hole condition problems such as sloughing, packing-off, etc. Transducers are also used for production testing. Multi-range chart recorders record pressure "in" on 0 - 1000 psi scale and pressure "out" on 0 - 500 psi scale.

12 TEMPERATURE
J-type thermocouples provide sensitive "in" and "out" fluid temperature measurements of mud or air for relative indications of formation temperature and potentially productive geothermal zones.
Chart recorder graphically displays either temperature "in" or "out," with ranges of 0 - 100°, 0 - 250° in either °C or °F. Delta zero allows infinite temperature range recording.

13 DRILL RATE & DEPTH RECORDER
The continuous plot of kelly height by the drill rate recorder give high-resolution visual display of minute fluctuations in drill rate down to one foot per hour, and allows depth control even with very fast penetration rates. Recorded automatically, the kelly position and character of the drill rate curve provide a daily record of rig activities other than drilling.

14 COMPUTATIONAL HARDWARE
Wellsite computing capability provides quick, convenient programs for onsite analysis of drilling, production testing & engineering data.

15 TYPEWRITER
Used for Geothermal Data Log preparation.

16 GEOLOGICAL EVALUATION WORK AREA
Fully equipped geologi work area for thorough petrographic analysis a log preparation include microscope for cuttings evaluation, bulk density determinations by differential separation, samp preparation and a com plete inventory for select chemical analyses.
WET CHEMICAL ANALYSIS

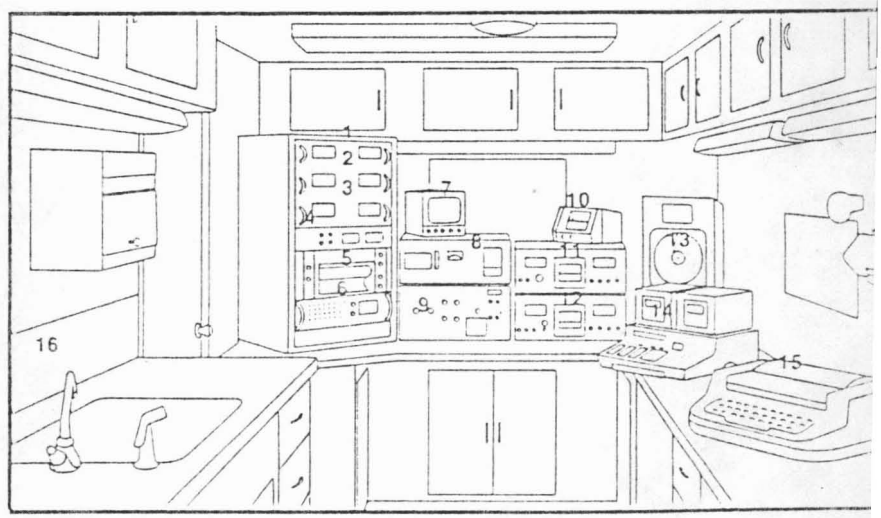


Figure 2

$$Ms = \left(\frac{C}{N} \times A - I\right) \times 0.4$$

Where:

Ms = steam flow, lbs./hr.
C = condensate and water, lbs.
N = non-condensibles, lbs.
A = air injected, lbs./hr., measured at compressors
I = water injected, lbs./hr., measured at pumps

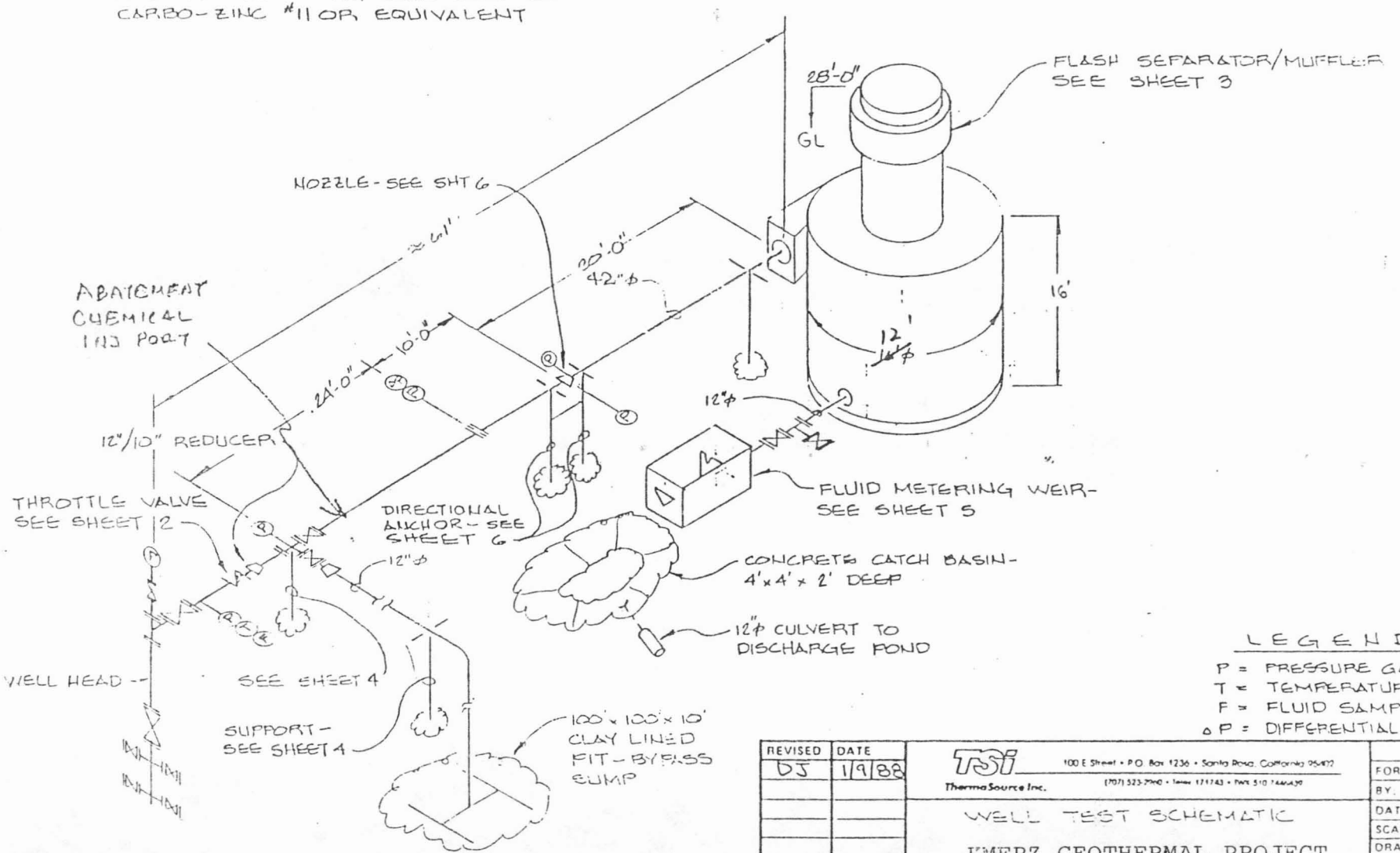
This metholodogy assumes that most of the non-condensible gas is injected air. This is a valid assumption for most geothermal areas and should be valid for KMERZ. The ratio of condensibles to non-condensibles is determined by evacuation of a known volume. A sample from the blooie line is passed through a condenser and then to a separator (flask with two-hole stopper). The gas from the separator is piped to a known volume filled with water. When the gas completely replaces the water in the known volume, the flow is stopped. The condensate collected in the separator is weighed to get "C" above. "N" is derived from the known volume and conversion to weight using the Ideal Gas Law. The factor of 0.4 is an estimate of the steam quality based on HGP-A.

When drill pipe is not in the hole, for example, when changing drill bits, the well is not expected to flow. Hence no H2S emissions are expected. If the well should flow only steam, production rates may be measured with a pitot tube inserted into the blooie line. If production is two-phase, the amount of water produced at the muffler will be measured and the 40% steam quality factor applied. Thus H2S abatement chemicals can be injected in appropriate qualitities to maintain emission levels below 8.5 lbs./hr.

2) Steam Flow Rate During Testing

Figure 3 is a schematic showing the testing facilities and fluid flow during the testing of a geothermal well. The calculation of mass flow relies on the James lip pressure to determine mass flow (Mt). In addition brine flow (Mw) is measured through a weir box. The applicable equations for determining total mass flow are:

NOTE: AFTER FABRICATION, VESSEL TO BE SANDBLASTED TO A NEAR-WHITE FINISH AND PAINTED WITH ONE COAT OF CARBO-ZINC #11 OR EQUIVALENT



LEGEND

P = PRESSURE GAUGE
T = TEMPERATURE GAUGE
F = FLUID SAMPLE
ΔP = DIFFERENTIAL PRESSUR

REVISED	DATE
DJ	1/9/88

TSI Thermal Source Inc. 100 E Street • P.O. Box 1236 • Santa Rosa, California 95402 (707) 523-2900 • Telex 171743 • FAX 510 744-1439

WELL TEST SCHEMATIC

KMERZ GEOTHERMAL PROJECT

DRAWN
FOR:
BY:
DATE:
SCALE: NONE
DRAWING No.

SHEET 2 OF 14

Figure 3

$$Mt = 4.1 \times 10^{7} \times A \times P^{.96} / ho^{1.102} \quad lbs/hr.$$

Where:
A = cross sectional area of James tube, ft2
P = lip pressure, psia
ho = stagnation enthaply, BTU/hr.

Two additional equations are used to check the result:

a) Mass balance

$$Mt = Mw + Ms$$

Where:
Mw = Mass flow of brine, lbs/hr.
Ms = Mass flow of steam, lbs/hr.

b) Energy balance

$$Mt \times Ho = Mw \times Hw + Ms \times Hs$$

Where:
Ho = enthalpy of total flow, BTU/lb.
Hw = enthalpy of brine, BTU/lb.
Hs = enthalpy of steam, BTU/lb.

Mw, Ho, Hw and Hs are known and the above two equations collapse to two equations and two unknowns, MT and MS. Thus $Mt = (Mw \times Hw - Mw \times Hs)/(Ht-Hs)$.

The total mass flow so derived can be checked against the mass flow derived from the James lip equation.

c. Chemical Injection Procedure.

Upon determining that the H2S emission rate will be greater than 8.5 lbs/hr., personnel will activate the chemical (NAOH) injection system.

Abatement is achieved by absorption of H2S into NAOH to form hydrosulfide and sulfide ions. The abatement system, as

shown in Figure 4, consists of a chemical (NAOH) storage tank, a metering pump, feeder lines from the tank to the blooie line, and a high pressure injection spray nozzle installed in the blooie line close to the well bore to provide the maximum contact time between H2S and the abatement chemical. Upon activating the abatement system, the initial mole ratio of 4 to 1, NAOH to H2S will be injected into the blooie line. Amounts of NAOH injected into the blooie are controlled by settings on the metering pumps. The reaction must occur within the 2 - 3 seconds time required for steam to move from the wellhead to the outlet in the muffler/separator. Field observation and evaluation will be used to determine future optimum mole ratios, and downstream H2S monitoring will confirm that emissions are being limited to proper levels.

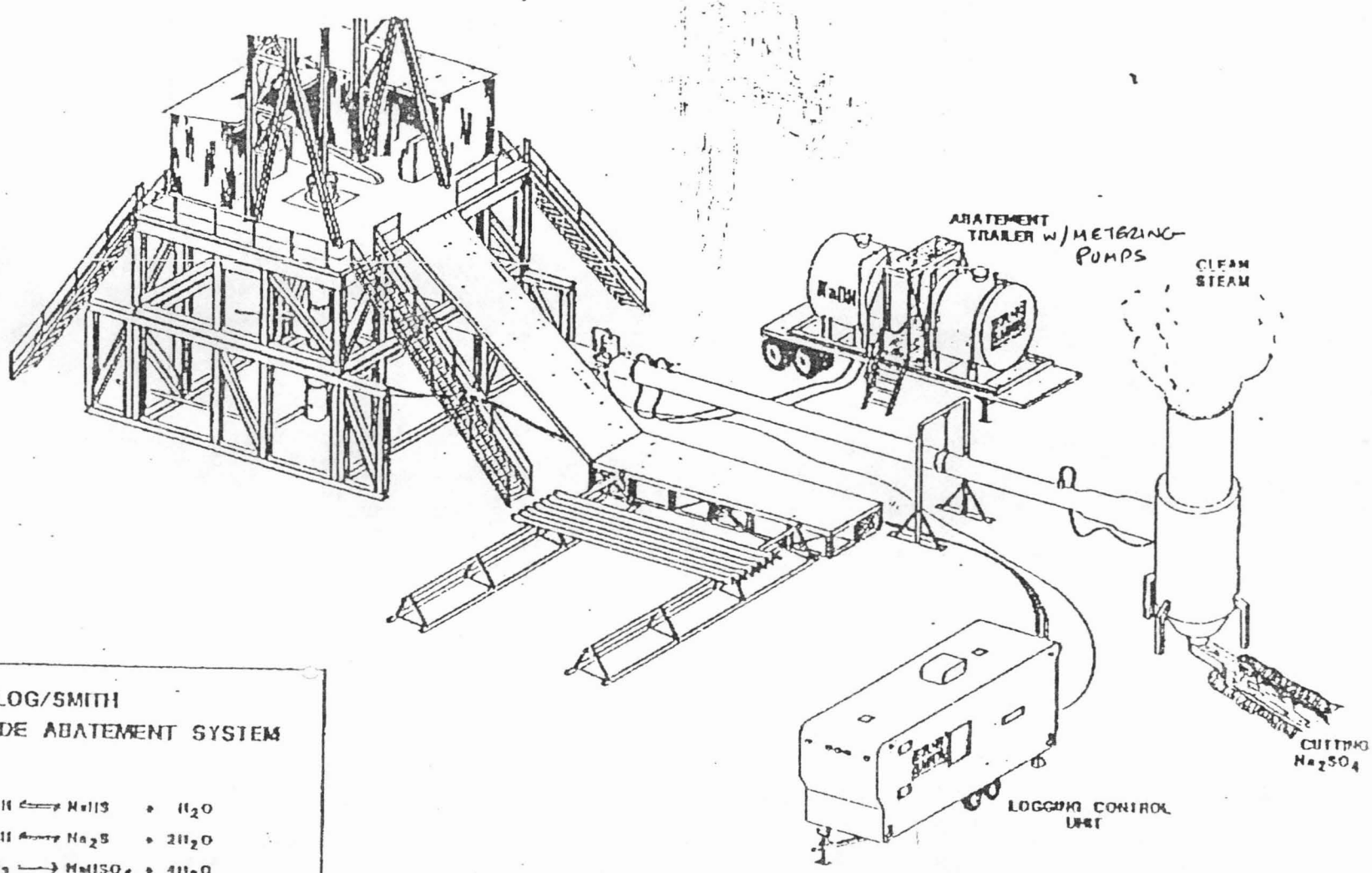
d. Data on Expected Geothermal Flow Rates.

Based on available data, from HGP-A and successful wells drilled by other operators, we have estimated an average mass flow rate of 200,000 lbs./hr. for wells in the KMERZ. There is no present industry technology of predicting flow rates of individual wells prior to flow testing even though data on several successful wells in a discovery area can provide expected ranges or averages of well flows of subsequent successful wells.

3. Figure 5 shows the potential emissions of criteria pollutants for diesel engines during drilling.

4. Determination of favorable meteorological conditions for venting. Such discharge will only be conducted during daylight and only when winds are less than 18 mph, in order to limit emissions to meet ambient air standards, based on worst case EPA model studies described in Enclosure 1. While standard, industry practice when drilling with mud is to vent completed wells at fully opened flows it is expected that when the latter phase of drilling of each well is completed by drilling with air/aerated water most

CHEMICAL INJECTION SYSTEM FOR H_2S ABATEMENT



EXLOG/SMITH
HYDROGEN SULFIDE ABATEMENT SYSTEM

$$H_2S + NaOH \rightleftharpoons NaHS + H_2O$$
$$H_2S + 2NaOH \rightleftharpoons Na_2S + 2H_2O$$
$$NaHS + 4H_2O_2 \longrightarrow NaHSO_4 + 4H_2O$$
$$Na_2S + 4H_2O_2 \longrightarrow Na_2SO_4 + 4H_2O$$

Figure 4

ESTIMATES OF POTENTIAL EMISSIONS OF CRITERIA

POLLUTANTS FROM OPERATING DRILLING EQUIPMENT

DIESEL ENGINES *

Pollutant	Total Amounts	Source
Nitrogen Oxides	24.72 kg/day 1.4832 t/well	Drilling Rig " "
Carbon Monoxide	4.5 kg/day 0.27 t/well	Drilling Rig " "
Hydrocarbons	1.71 kg/day 0.103 t/well	Drilling Rig " "
Sulfur Dioxide	1.56 kg/day 0.094 t/well	Drilling Rig " "

* Basis for Emission Estimates.

The estimated emission rates shown above are based on emissions from the drilling rig (diesel exhausts) as derived from EPA document AP-42, Suppl. 14, May 1983, which describes emissions for oil well drilling rigs.

Figure 5

such wells will be cleared of the drill cuttings (rocks and debris) within the wellbore during the air drilling phase by the force of the air/aerated water up through the annulus of the wellbore. This would normally preclude the need to vent the well unabated. Particulate emissions when venting unabated is required are expected to amount to 20,000 mg/kg of brine (or 1,000 kg/hr.) based on the HGP-A well data and our estimates of a 50,000 kg/hr. brine flow. Since it is planned to complete most wells with air drilling, it is expected that venting unabated will occur infrequently and when it does occur after air drilling, the venting period will be limited to no more than 4 hour intervals over two days not to exceed 8 hours total.

5. Ambient air quality analysis. (The response to paragraphs 8, 9, 10 and 11 of the referenced letter is reflected in a revised air quality impact analysis utilizing the correct stack parameters and flow rates and EPA modelling procedures as shown in Enclosure (1)).

6. It should be noted that the emissions when drilling with air and during unabated venting (when required) are significantly reduced from the notes listed in the application for Authority to Construct which reflected "maximum possible" emmissions during the specified operation. The revised emission notes indicate the level of emissions that will occur in normal operations and are the basis for the revised impact estimates reported herein.

If you have any questions, please call me.

Sincerely,

TRUE GEOTHERMAL ENERGY CO.
(Operator for True/Mid-Pacific Geothermal Venture)

For H.A. True, III
Partner

Encl. (1) Report of Estimates of Air Quality Impacts During Construction of Geothermal Wells.

REPORT OF AIR QUALITY IMPACTS DURING CONSTRUCTION OF GEOTHERMAL WELLS

PUNA DISTRICT, HAWAII

Prepared for:

True/Mid-Pacific Geothermal Venture

Prepared by:

Barry D. Neal
Consulting Meteorologist

April 1989

Enclosure 1
To Ltr to DOH
dtd. April 11, 1989

CONTENTS

FIGURES

TABLES

Table

1.0 Introduction

True/Mid-Pacific Geothermal Venture is proposing to construct geothermal exploration wells along a segment of the Kilauea east rift zone in the Puna District on the Island of Hawaii. A project location map is given in Figure 1. The drilling of up to 12 deep wells over a period of 20 to 24 months is planned. All wells will be located within the property boundary, but their exact location will only be determined as the exploratory phase of the project progresses. Well construction will proceed sequentially with each well having three phases of development consisting of drilling, venting and flow testing.

The State of Hawaii Department of Health (DOH) has requested True/Mid-Pacific Geothermal Venture to assess the potential impacts on air quality that may result from emissions emanating from the proposed geothermal wells. This study investigates the potential air quality impacts that could result from the construction of the subject geothermal wells as planned.

2.0 Hydrogen Sulfide and Particulate Emissions

Hydrogen sulfide (H2S) and particulate will be the primary air pollutants emitted from the proposed facilities. Stack emission data on a per well basis for each phase of well development for H2S and particulate are shown in Table 1. As described in the True/-Mid-Pacific Geothermal Authority to Construct Application [Ref. 1], emissions during drilling will only occur for a few days near the end of the drilling process. Venting emissions will occur for a period of 8 hours total for each well, up to 4 hours per day. Emissions from flow testing will be continuous for a period of about 30 to 45 days.

3.0 Estimated Air Quality Impacts of H2S and Particulate Emissions

Based on the emission data given in Table 1, an air quality modeling study was undertaken to assess the potential impacts from the project's H2S and particulate emissions. The modeling study followed the U.S. Environmental Protection Agency (EPA) Guideline on Air Quality Modeling [Ref. 2]. Because the project stacks are relatively short and the terrain heights in the project vicinity exceed stack heights, procedures for complex terrain modeling were followed. Receptors less than stack height and between stack height and plume height were modeled using MPTER [Ref. 3]. Since the locations of the wells has not yet been fixed with respect to the sloping terrain and because MPTER will not accept receptor heights above stack height, all MPTER receptor terrain heights were assumed to be at stack height. Potential cases of plume impact on terrain above stack height were assessed using the Complex I model.

No onsite meteorological data are available for the project site at the present time, but monitoring will be performed during the exploratory well drilling program. In lieu of onsite data, it is necessary to examine the range of meteorological conditions that are possible and assume that any or all may occur. This generally results in conservative estimates of worst-case air quality concentrations. For this assessment, it was assumed that the wind could come from any direction. Combinations of wind speed and Pasquill-Gifford stability classes suggested by EPA [Ref. 4] for screening analysis along with supplemental cases were assumed. Table 2 shows the 50 wind speed/stability class combinations that were used for modeling.

Mixing heights in the Puna area generally are relatively high due to the influence of the ocean. A previous study of mixing heights for the area [Ref. 5] found that mixing heights usually exceeded 1000 m. For this analysis, a worst-case mixing height of 300 m was assumed. A surface roughness length of 30 cm and wind speed profile exponents for rural areas were also used as model inputs.

The exact locations of the exploratory wells on the property will not be established until and during the drilling program. For purposes of this air quality impact assessment, it was assumed that the nearest a well would be located from the property boundary would be 800 m.

The predicted worst-case air quality impacts for the three operational phases for each well are summarized in Table 3. As noted in the table, the predicted concentrations include background values of 10 ug/m^3 for H_2S, 40 ug/m^3 for total suspended particulate (TSP) and 20 ug/m^3 for particulate matter under 10 um diameter (PM-10). These are estimated based on the limited data available for the area and on data from other locations in the state. Predicted concentrations for both on-site and off-site locations are shown in the table. Although the property boundary will not be fenced, it is very unlikely that the public could enter onto the property and be exposed to on-site concentrations due to the extreme ruggedness of the project area.

Predicted Worst-Case 1-Hour H_2S Concentrations

Computer printouts from MPTER for H2S impacts during drilling, venting and testing are provided in Appendices A, B and C, respec-

tively. Calculations for plume impact following the method of Complex I are given in Appendix D. During drilling operations, a maximum predicted 1-hour H_2S concentration of 422 ug/m^3 was predicted by MPTER. This would occur on-site within 100 m of the source during extremely high winds (see hour 36, Appendix A) when plume rise would be minimal. The highest predicted off-site concentration predicted by MPTER was 34 ug/m^3 (see hour 30, Appendix A).

Maximum concentration during plume impact conditions would be 31 ug/m^3 (see Appendix D).

The maximum predicted 1-hour H_2S concentration due to venting was 165 ug/m^3 on-site (see hour 20, Appendix B) and 132 ug/m^3 off-site (see Appendix D). This assumes venting will be done only during the daytime (i.e., when stability classes A - D occur) when wind speeds are less than 18 mph (8 m/s). Under lower wind speed conditions, the high exit velocity and thermal buoyancy of the exhaust gas will cause the plume to rise anywhere from 50 to 350 m above grade and thus result in lower ground-level concentrations.

During the testing phase of exploratory well development, maximum 1-hour H_2S concentrations will be similar to those predicted for drilling operations. A maximum on-site concentration of 378 ug/m^3 would occur 100 m from the well (see hour 36, Appendix C); the maximum predicted off-site concentration would be 36 ug/m^3 at a distance of 800 m (see hour 30, Appendix C).

Based on the results of the modeling study, H_2S emissions from the exploratory geothermal wells should comply with the 139 ug/m^3 1-

hour standard proposed by the Hawaii State Department of Health at all off-site locations provided venting is done during the daytime only when winds are below 18 mph. Concentrations may occasionally exceed the standard on-site over a small area very near to the geothermal well during drilling and testing operations under extreme wind speed conditions.

Predicted Worst-Case 24-Hour Particulate Concentrations

Calculations pertaining to assessments of maximum particulate concentrations are given in Appendix E. Worst-case 24-hour TSP and PM-10 concentrations during drilling were estimated by first estimating the TSP/PM-10 emission rates and then multiplying the predicted worst-case 1-hour H_2S concentration by the emission ratio of TSP or PM-10 to H_2S. A 1-hour to 24-hour conversion factor of 0.6 was then applied. (A 1-hour to 24-hour conversion factor of 0.6 is recommended by the EPA for low plumes in areas of high terrain [Ref. 4].) Estimates of 24-hour PM-10 concentrations during venting were also factored by a value of 4 / 24 to account for the fact that venting will only occur for a maximum of 4 hours during any 24 hour period. Background concentrations of 40 ug/m^3 for TSP and 20 ug/m^3 for PM-10 were added to the predicted concentration increments to determine total concentration. As noted in Table 3, no deposition of the TSP or PM-10 particles was assumed for either drilling or venting emissions.

During drilling operations, maximum on-site 24-hour TSP and PM-10 concentrations of 386 and 193 ug/m^3, respectively, were forecast. These would occur near the well beyond 100 m but within 800 m. The exact locations of the 24-hour TSP and PM-10 concentrations are not indicated in the table because the 24-hour maximum generally occurs

farther away than the 1-hour maximum. The worst-case concentrations predicted for off-site locations were 60 ug/m^3 for TSP and 30 ug/m^3 for PM-10. These concentrations would occur near the property boundary.

Worst-case 24-hour concentrations predicted for onsite during venting were 135 ug/m^3 for TSP and 68 ug/m^3 for PM-10. Offsite, the highest estimated concentrations were 115 ug/m^3 TSP and 58 ug/m^3 PM-10; these concentrations were predicted to occur on elevated terrain near the property boundary. All venting concentration estimates are based on emissions of 4 hours per day.

Based on the analysis described above, TSP and PM-10 emissions during drilling and venting operations would be within both the state TSP and the national PM-10 150 ug/m^3 standards at all off-site locations. During drilling, a small area onsite may exceed the standards.

4.0 Estimated Air Quality Impacts of Trace Element Emissions

Particulate matter emitted from the exploratory wells will contain various trace elements that could be potentially harmful if ambient ground-level concentrations exceed threshold limit values (TLV's) [Ref. 6]. To assess this potential problem, data from HGP-A brine were examined to identify the trace elements present in the brine and their concentration levels. Table 4 shows the upper concentration range limit of various trace elements known to be present in the brine. The greatest potential for emitting these trace elements will occur during well venting when it is estimated that 50 t/hr of brine associated with each well will be emitted. Each

well will be vented for a maximum of 8 hours during the exploratory phase for a period of up to 4 hours during a day.

To assess the potential impact on air quality, the concentration of each trace element at the well vent first was calculated, and then the maximum 1-hour ground-level concentration increment was estimated by ratioing the predicted maximum H_2S concentration by the trace element/H_2S emission rate. Forty percent of the material was estimated to be deposited on the ground very near the source. Based on visual observations of well venting, this is a conservative estimate. For comparison to the TLV time weighted average (TLV-TWA), maximum 1-hour concentrations were converted to 24-hour values using a 0.6 conversion factor and a 4/24 emission factor. Calculations for the estimated worst-case trace element concentrations are included in this report as Appendix F.

Assuming background concentrations of these constituents are currently low, the estimated ground-level concentration increments shown in Table 4 represent near total ambient concentrations. Table 4 shows the available TLV-TWA for each of the trace elements listed in the table. Although many of the trace element concentrations exceed the TLV-TWA at the vent, all worst-case 24-hour ground-level concentrations would be far below the respective TLV-TWA.

REFERENCES

1. Application for Authority to Construct Geothermal Wells, True/Mid-Pacific Geothermal Venture, September 1988.

2. Guideline on Air Quality Models, with Supplement A, U.S. Environmental Protection Agency, Research Triangle Park, NC, July 1986, EPA-450/2-78-027R.

3. User's Guide for MPTER, a Multiple Point Gaussian Dispersion Algorithm with Optional Terrain Adjustment, U.S. Environmental Protection Agency, April 1980, EPA-600/8-80-016.

4. Guidelines for Air Quality Maintenance Planning and Analysis; Volume 10 (Revised): Procedures for Evaluating Air Quality Impact of New Stationary Sources, U.S. Environmental Protection Agency, October 1977, EPA-450/4-77-001.

5. Evaluation of BACT for and Air Quality Impact of Potential Geothermal Development in Hawaii, prepared for U.S. Environmental Protection Agency, Dames & Moore, January 1984.

6. Threshold Limit Values and Biological Exposure Indices for 1988-1989, American Conference of Governmental Industrial Hygienists, Cincinnati, Ohio, 1988.

7. Turner, D. Bruce, Workbook of Atmospheric Dispersion Estimates, U.S. Department of Health, Education, and Welfare, 1969.

8. Valley Model User's Guide, U.S. Environmental Protection Agency, September 1977, EPA-450/2-77-018.

9. Hawaii Air Quality Data for the Period of January 1985 to December 1987, State Department of Health.

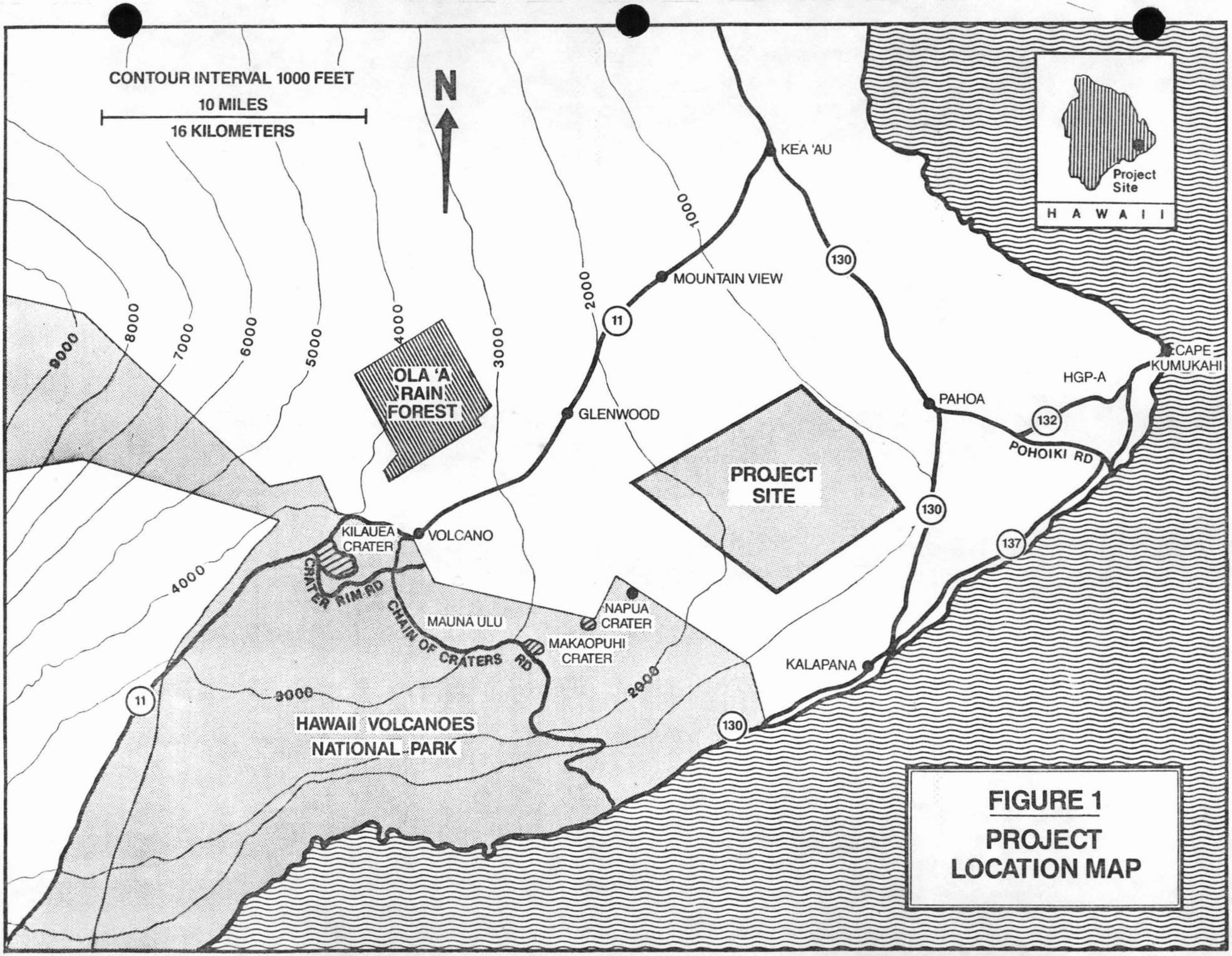


FIGURE 1

PROJECT LOCATION MAP

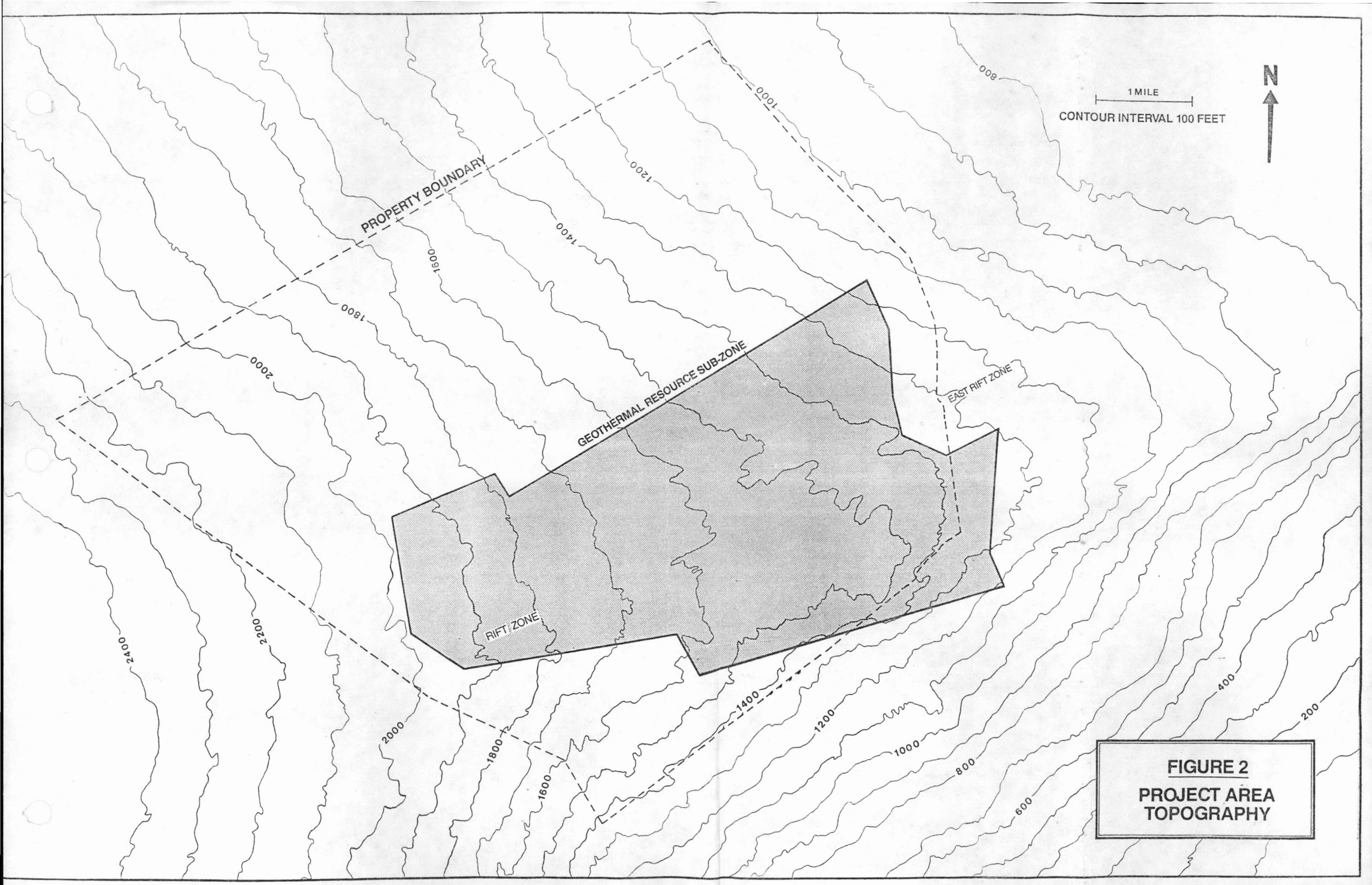


FIGURE 2

PROJECT AREA TOPOGRAPHY

Table 1

EMISSION DATA FOR TRUE/MID-PACIFIC EXPLORATORY GEOTHERMAL WELLS

Source	Stack Height (m)	Stack Diameter (m)	Stack Temperature (K)	Exit Velocity (m/s)	H2S Emissions (g/s)	Particulate Emissions (g/s)
Drilling	5	2.0	373	6.7	1.07	2.5
Venting	4	0.25	373	449.6	18.1	277.8
Testing	2	4.0	373	1.7	1.07	nil

Notes:

1) Emissions are per well. Wells will not operate more than one at a time.

2) Emission rates indicated are after control.

Table 3

PREDICTED WORST-CASE AIR QUALITY IMPACTS FROM
TRUE/MID-PACIFIC EXPLORATORY GEOTHERMAL WELLS

Source	Parameter	Period	On-Site		Off-Site	
			Distance (m)	Concentration (ug/m3)	Distance (m)	Concentration (ug/m3)
Drilling	H2S	1 hr	100	422	800	34
	TSP	24 hrs	-	386	-	60
	PM-10	24 hrs	-	193	-	30
Venting	H2S	1 hr	500	165	870	132
	TSP	24 hrs	-	135	-	115
	PM-10	24 hrs	-	68	-	58
Testing	H2S	1 hr	100	378	800	36

Notes:

1) Proposed 1-hour Hawaii State H2S standard is 139 ug/m3. Hawaii State 24-hour TSP standard is 150 ug/m^3

2) National standard for 24-hour PM-10 is 150 ug/m3.

3) Distance refers to radial distance from well. Onsite refers to distances less than 800 m; offsite refers to distances greater than or equal to 800 m.

4) Venting to be done during daytime only for a maximum of 4 hours when winds less than 18 mph.

5) Predicted TSP and PM-10 concentrations assume no deposition of their respective size fractions and background concentrations of 40 and 20 ug/m^3, respectively.

6) Predicted H_2S concentrations include a background value of 10 ug/m^3.

Table 4

POTENTIAL TRACE ELEMENT CONCENTRATIONS FROM
TRUE/MID-PACIFIC EXPLORATORY GEOTHERMAL WELLS DURING VENTING

Element	Concentration: HGP-A Brine (ppmw)[a]	Concentration: Steam Vent (mg/m^3)[b]	Concentration: 24-Hour Ground Level Increment (mg/m^3)[c]	TLV-TWA[d] (mg/m^3)
Ammonia	<0.05	<0.033	nil	18
Arsenic	<0.4	<0.26	nil	0.2
Boron	<11	<7.1	nil	10
Bromide	<80	<52	<0.00044	0.7
Calcium	<920	<616	<0.0052	2 - 10
Chloride	<10,000	<6,588	<0.056	n/a
Fluoride	<0.9	<0.57	nil	2.5
Iodide	<20	<13	<0.00011	1
Iron	<8.4	<5.7	<0.000048	1 - 5
Lithium	<9	<5.7	<0.000048	0.025
Magnesium	<2	<1.3	<0.000011	10
Manganese	<8.5	<5.7	<0.000048	5
Mercury	<0.05	<0.033	nil	0.01 - 0.1
Potassium	<2,700	<1,800	<0.015	2
Silica	<1,500	<995	<0.0085	0.05 - 10
Sodium	<10,000	<6,600	<0.056	2
Sulfate	<24	<16	<0.00013	-

[a] Brine concentrations are upper range limits (see Ref. 1).
[b] Based on 50 metric tons per hour brine and steam flow rate of 21.1 m^3/s.
[c] Ambient ground-level concentration increments to be added to background concentration to obtain total ambient concentration.
[d] Threshold Limit Value - Time Weighted Average. Range of TLV-TWA for various compounds is indicated for some trace elements.

Appendix A

MPTER PRINTOUTS FOR DRILLING

```
1                MPTER  (VERSION 81350)
                 AN AIR QUALITY DISPERSION MODEL IN
                 SECTION 2. NON-GUIDELINE MODELS.
                 IN UNAMAP (VERSION 5) DEC 82
                 SOURCE: FILE 13 ON UNAMAP MAGNETIC TAPE FROM NTIS.
0                MPTER - VERSION 81350
                 IBM PC VERSION 3.00 COPYRIGHT 1983 JAMES C. CLARY, JR

 MPTER RUN FOR MIDPAC GEOTHERMAL DRILLING - H2S


0                        GENERAL INPUT INFORMATION

  THIS RUN OF MPTER-VERSION 81350 IS FOR THE POLLUTANT SO2  FOR   50   1-HOUR PERIODS.
  CONCENTRATION ESTIMATES BEGIN ON HOUR- 1, JULIAN DAY-  1, YEAR-1989.
  A FACTOR OF      1.0000000 HAS BEEN SPECIFIED TO CONVERT USER LENGTH UNITS TO KILOMETERS.
    1 SIGNIFICANT SOURCES ARE TO BE CONSIDERED.
 THIS RUN WILL NOT CONSIDER ANY POLLUTANT LOSS.
   A FACTOR OF      1.0000000 HAS BEEN SPECIFIED TO CONVERT USER HEIGHT UNITS TO METERS.
0 OPTION      OPTION LIST                OPTION SPECIFICATION : 0= IGNORE OPTION
                                                                1= USE OPTION
                      TECHNICAL OPTIONS
       1      TERRAIN ADJUSTMENTS                                1
       2      DO NOT INCLUDE STACK DOWNWASH CALCULATIONS           0
       3      DO NOT INCLUDE GRADUAL PLUME RISE CALCULATIONS       0
       4      CALCULATE INITIAL PLUME SIZE                        1
                     INPUT OPTIONS
       5      READ MET DATA FROM CARDS                           1
       6      READ HOURLY EMISSIONS                              0
       7      SPECIFY SIGNIFICANT SOURCES                         0
       8      READ RADIAL DISTANCES TO GENERATE RECEPTORS          0
                     PRINTED OUTPUT OPTIONS
       9      DELETE EMISSIONS WITH HEIGHT TABLE                  1
      10      DELETE MET DATA SUMMARY FOR AVG PERIOD              1
      11      DELETE HOURLY CONTRIBUTIONS                        1
      12      DELETE MET DATA ON HOURLY CONTRIBUTIONS             1
      13      DELETE FINAL PLUME RISE CALC ON HRLY CONTRIBUTIONS   1
      14      DELETE HOURLY SUMMARY                              0
      15      DELETE MET DATA ON HRLY SUMMARY                     0
      16      DELETE FINAL PLUME RISE CALC ON HRLY SUMMARY         0
      17      DELETE AVG-PERIOD CONTRIBUTIONS                     1
      18      DELETE AVERAGING PERIOD SUMMARY                     1
      19      DELETE AVG CONCENTRATIONS AND HI-5 TABLES            1
                     OTHER CONTROL AND OUTPUT OPTIONS
      20      RUN IS PART OF A SEGMENTED RUN                      0
      21      WRITE PARTIAL CONC TO DISK OR TAPE                  0
      22      WRITE HOURLY CONC TO DISK OR TAPE                   0
      23      WRITE AVG-PERIOD CONC TO DISK OR TAPE                0
      24      PUNCH AVG-PERIOD CONC ONTO CARDS                    0
 ANEMOMETER HEIGHT IS:     10.00
 EXPONENTS FOR POWER- LAW WIND INCREASE WITH HEIGHT ARE: .07, .07, .10, .15, .35, .55
 TERRAIN ADJUSTMENTS ARE:  .500, .500, .500, .500, .000, .000
```

1 POINT SOURCE INFORMATION

SOURCE	EAST COORD (USER UNITS)	NORTH COORD (USER UNITS)	SO2(G/SEC) EMISSIONS	PART(G/SEC) EMISSIONS	STACK HT(M)	STACK TEMP(K)	STACK DIAM(M)	STACK VEL(M/SEC)	POTEN. IMPACT (MICRO G/M**3)	EFF HT(M) USER UNITS	GRD-LVL ELEV HT M**4/S**3	BUOY FLUX F
1 DRILLING	.00	.00	1.07	.00	5.0	373.0	2.0	6.7	15.33	57.06	.00	14.13

0 SIGNIFICANT SO2 POINT SOURCES

RANK	CHI-MAX (MICROGRAMS/M**3)	SOURCE NO.
1	15.33	1

0 ADDITIONAL INFORMATION ON SOURCES.
0 EMISSION INFORMATION FOR 1 (NPT) POINT SOURCES HAS BEEN INPUT
1 SIGNIFICANT POINT SOURCES(NSIGP) ARE TO BE USED FOR THIS RUN
THE ORDER OF SIGNIFICANCE(IMPS) FOR 25 OR LESS POINT SOURCES USED IN THIS RUN AS LISTED BY POINT SOURCE NUMBER:
1

0 RECEPTOR INFORMATION

RECEPTOR	IDENTIFICATION	EAST COORD (USER UNITS)	NORTH COORD (USER UNITS)	RECEPTOR HT ABV LOCAL GRD LVL (METERS)	RECEPTOR GROUND LEVEL ELEVATION (USER HT UNITS)
1	WEST	-.100	.000	.0	5.0
2	WEST	-.200	.000	.0	5.0
3	WEST	-.300	.000	.0	5.0
4	WEST	-.400	.000	.0	5.0
5	WEST	-.500	.000	.0	5.0
6	WEST	-.600	.000	.0	5.0
7	WEST	-.700	.000	.0	5.0
8	WEST	-.800	.000	.0	5.0
9	WEST	-.900	.000	.0	5.0
10	WEST	-1.000	.000	.0	5.0
11	WEST	-1.200	.000	.0	5.0
12	WEST	-1.500	.000	.0	5.0
13	WEST	-2.000	.000	.0	5.0
14	WEST	-2.500	.000	.0	5.0
15	WEST	-3.000	.000	.0	5.0
16	WEST	-4.000	.000	.0	5.0
17	WEST	-5.000	.000	.0	5.0

0 * ONE ASTERISK INDICATES THAT THE ASSOCIATED RECEPTOR(S) HAVE A GROUND LEVEL ELEVATION LOWER THAN THE LOWEST SOURCE BASE ELEVATIO

CAUTION SHOULD BE USED IN INTERPRETING CONCENTRATIONS FOR THESE RECEPTORS.
** TWO ASTERISKS INDICATE THAT THE ASSOCIATED RECEPTOR(S) HAVE GROUND LEVEL ELEVATIONS ABOVE THE LOWEST STACK TOP.
CONSEQUENTLY NO CALCULATIONS WILL BE PERFORMED WITH THIS RECEPTOR.A SERIES OF ASTERISKS WILL INSTEAD APPEAR IN THE OUTPUT.

HOUR	THETA (DEG)	SPEED (M/S)	MIXING HEIGHT(M)	TEMP (K)	STABILITY CLASS
1	90.00	1.00	300.00	298.00	1

FINAL HT (M) 153.79

DIST FIN HT (KM) .246

0

RECEPTOR NO.	NAME	EAST COORD	NORTH COORD	RECEPTOR HT ABV GRD (M)	RECEPTOR GRD-LVL ELEV (USER HT UNITS)	TOTAL FROM SIGNIF POINT SOURCES	TOTAL FROM ALL SOURCES	CONCENTRATION RANK
1	WEST	-.10	.00	.0	5.0	2.9331	2.9331	13
2	WEST	-.20	.00	.0	5.0	2.3254	2.3254	15
3	WEST	-.30	.00	.0	5.0	3.8197	3.8197	10
4	WEST	-.40	.00	.0	5.0	7.6171	7.6171	5
5	WEST	-.50	.00	.0	5.0	10.1908	10.1908	1
6	WEST	-.60	.00	.0	5.0	10.0550	10.0550	2
7	WEST	-.70	.00	.0	5.0	8.9794	8.9794	3
8	WEST	-.80	.00	.0	5.0	8.0551	8.0551	4
9	WEST	-.90	.00	.0	5.0	7.3013	7.3013	6
10	WEST	-1.00	.00	.0	5.0	6.6804	6.6804	7
11	WEST	-1.20	.00	.0	5.0	5.7208	5.7208	8
12	WEST	-1.50	.00	.0	5.0	4.7246	4.7246	9
13	WEST	-2.00	.00	.0	5.0	3.6866	3.6866	11
14	WEST	-2.50	.00	.0	5.0	3.0398	3.0398	12
15	WEST	-3.00	.00	.0	5.0	2.5964	2.5964	14
16	WEST	-4.00	.00	.0	5.0	2.0251	2.0251	16
17	WEST	-5.00	.00	.0	5.0	1.6708	1.6708	17

HOUR	THETA (DEG)	SPEED (M/S)	MIXING HEIGHT(M)	TEMP (K)	STABILITY CLASS
2	90.00	1.50	300.00	298.00	1

FINAL HT (M) 109.13

DIST FIN HT (KM) .246

0

RECEPTOR NO.	NAME	EAST COORD	NORTH COORD	RECEPTOR HT ABV GRD (M)	RECEPTOR GRD-LVL ELEV (USER HT UNITS)	TOTAL FROM SIGNIF POINT SOURCES	TOTAL FROM ALL SOURCES	CONCENTRATION RANK
1	WEST	-.10	.00	.0	5.0	7.4984	7.4984	5
2	WEST	-.20	.00	.0	5.0	6.3584	6.3584	7
3	WEST	-.30	.00	.0	5.0	8.9415	8.9415	3
4	WEST	-.40	.00	.0	5.0	12.2063	12.2063	1
5	WEST	-.50	.00	.0	5.0	11.5951	11.5951	2
6	WEST	-.60	.00	.0	5.0	8.9388	8.9388	4
7	WEST	-.70	.00	.0	5.0	6.8585	6.8585	6
8	WEST	-.80	.00	.0	5.0	5.7833	5.7833	8
9	WEST	-.90	.00	.0	5.0	5.1759	5.1759	9
10	WEST	-1.00	.00	.0	5.0	4.7233	4.7233	10
11	WEST	-1.20	.00	.0	5.0	4.0337	4.0337	11
12	WEST	-1.50	.00	.0	5.0	3.3233	3.3233	12
13	WEST	-2.00	.00	.0	5.0	2.5879	2.5879	13
14	WEST	-2.50	.00	.0	5.0	2.1318	2.1318	14
15	WEST	-3.00	.00	.0	5.0	1.8198	1.8198	15
16	WEST	-4.00	.00	.0	5.0	1.4185	1.4185	16
17	WEST	-5.00	.00	.0	5.0	1.1700	1.1700	17

HOUR	THETA (DEG)	SPEED (M/S)	MIXING HEIGHT(M)	TEMP (K)	STABILITY CLASS
3	90.00	2.00	300.00	298.00	1

FINAL HT (M) 83.10

DIST FIN HT (KM) .246

0 RECEPTOR NO.	NAME	EAST COORD	NORTH COORD	RECEPTOR HT ABV GRD (M)	RECEPTOR GRD-LVL ELEV (USER HT UNITS)	TOTAL FROM SIGNIF POINT SOURCES	TOTAL FROM ALL SOURCES	CONCENTRATION RANK
1	WEST	-.10	.00	.0	5.0	16.5570	16.5570	1
2	WEST	-.20	.00	.0	5.0	12.7256	12.7256	4
3	WEST	-.30	.00	.0	5.0	13.9190	13.9190	3
4	WEST	-.40	.00	.0	5.0	14.0184	14.0184	2
5	WEST	-.50	.00	.0	5.0	10.9183	10.9183	5
6	WEST	-.60	.00	.0	5.0	7.4910	7.4910	6
7	WEST	-.70	.00	.0	5.0	5.3689	5.3689	7
8	WEST	-.80	.00	.0	5.0	4.3899	4.3899	8
9	WEST	-.90	.00	.0	5.0	3.9037	3.9037	9
10	WEST	-1.00	.00	.0	5.0	3.5580	3.5580	10
11	WEST	-1.20	.00	.0	5.0	3.0349	3.0349	11
12	WEST	-1.50	.00	.0	5.0	2.4978	2.4978	12
13	WEST	-2.00	.00	.0	5.0	1.9435	1.9435	13
14	WEST	-2.50	.00	.0	5.0	1.6003	1.6003	14
15	WEST	-3.00	.00	.0	5.0	1.3657	1.3657	15
16	WEST	-4.00	.00	.0	5.0	1.0643	1.0643	16
17	WEST	-5.00	.00	.0	5.0	.8777	.8777	17

HOUR	THETA (DEG)	SPEED (M/S)	MIXING HEIGHT(M)	TEMP (K)	STABILITY CLASS
4	90.00	2.50	300.00	298.00	1

FINAL HT (M) 67.48

DIST FIN HT (KM) .246

0 RECEPTOR NO.	NAME	EAST COORD	NORTH COORD	RECEPTOR HT ABV GRD (M)	RECEPTOR GRD-LVL ELEV (USER HT UNITS)	TOTAL FROM SIGNIF POINT SOURCES	TOTAL FROM ALL SOURCES	CONCENTRATION RANK
1	WEST	-.10	.00	.0	5.0	28.7117	28.7117	1
2	WEST	-.20	.00	.0	5.0	18.9464	18.9464	2
3	WEST	-.30	.00	.0	5.0	16.7765	16.7765	3
4	WEST	-.40	.00	.0	5.0	13.9477	13.9477	4
5	WEST	-.50	.00	.0	5.0	9.7604	9.7604	5
6	WEST	-.60	.00	.0	5.0	6.3224	6.3224	6
7	WEST	-.70	.00	.0	5.0	4.3869	4.3869	7
8	WEST	-.80	.00	.0	5.0	3.5326	3.5326	8
9	WEST	-.90	.00	.0	5.0	3.1311	3.1311	9
10	WEST	-1.00	.00	.0	5.0	2.8523	2.8523	10
11	WEST	-1.20	.00	.0	5.0	2.4315	2.4315	11
12	WEST	-1.50	.00	.0	5.0	2.0003	2.0003	12
13	WEST	-2.00	.00	.0	5.0	1.5557	1.5557	13
14	WEST	-2.50	.00	.0	5.0	1.2807	1.2807	14
15	WEST	-3.00	.00	.0	5.0	1.0929	1.0929	15
16	WEST	-4.00	.00	.0	5.0	.8516	.8516	16
17	WEST	-5.00	.00	.0	5.0	.7023	.7023	17

HOUR	THETA (DEG)	SPEED (M/S)	MIXING HEIGHT(M)	TEMP (K)	STABILITY CLASS
5	90.00	3.00	300.00	298.00	1

FINAL HT (M) 57.06

DIST FIN HT (KM) .246

0 RECEPTOR NO.	NAME	EAST COORD	NORTH COORD	RECEPTOR HT ABV GRD (M)	RECEPTOR GRD-LVL ELEV (USER HT UNITS)	TOTAL FROM SIGNIF POINT SOURCES	TOTAL FROM ALL SOURCES	CONCENTRATION RANK
1	WEST	-.10	.00	.0	5.0	41.5396	41.5396	1
2	WEST	-.20	.00	.0	5.0	23.6678	23.6678	2
3	WEST	-.30	.00	.0	5.0	17.9100	17.9100	3
4	WEST	-.40	.00	.0	5.0	13.1726	13.1726	4
5	WEST	-.50	.00	.0	5.0	8.6551	8.6551	5
6	WEST	-.60	.00	.0	5.0	5.4277	5.4277	6
7	WEST	-.70	.00	.0	5.0	3.6994	3.6994	7
8	WEST	-.80	.00	.0	5.0	2.9535	2.9535	8
9	WEST	-.90	.00	.0	5.0	2.6130	2.6130	9
10	WEST	-1.00	.00	.0	5.0	2.3795	2.3795	10
11	WEST	-1.20	.00	.0	5.0	2.0279	2.0279	11
12	WEST	-1.50	.00	.0	5.0	1.6678	1.6678	12
13	WEST	-2.00	.00	.0	5.0	1.2969	1.2969	13
14	WEST	-2.50	.00	.0	5.0	1.0675	1.0675	14
15	WEST	-3.00	.00	.0	5.0	.9109	.9109	15
16	WEST	-4.00	.00	.0	5.0	.7097	.7097	16
17	WEST	-5.00	.00	.0	5.0	.5853	.5853	17

HOUR	THETA (DEG)	SPEED (M/S)	MIXING HEIGHT(M)	TEMP (K)	STABILITY CLASS
6	90.00	4.00	300.00	298.00	1

FINAL HT (M) 44.05

DIST FIN HT (KM) .246

0 RECEPTOR NO.	NAME	EAST COORD	NORTH COORD	RECEPTOR HT ABV GRD (M)	RECEPTOR GRD-LVL ELEV (USER HT UNITS)	TOTAL FROM SIGNIF POINT SOURCES	TOTAL FROM ALL SOURCES	CONCENTRATION RANK
1	WEST	-.10	.00	.0	5.0	62.1924	62.1924	1
2	WEST	-.20	.00	.0	5.0	28.2946	28.2946	2
3	WEST	-.30	.00	.0	5.0	17.5585	17.5585	3
4	WEST	-.40	.00	.0	5.0	11.2517	11.2517	4
5	WEST	-.50	.00	.0	5.0	6.9162	6.9162	5
6	WEST	-.60	.00	.0	5.0	4.1954	4.1954	6
7	WEST	-.70	.00	.0	5.0	2.8085	2.8085	7
8	WEST	-.80	.00	.0	5.0	2.2225	2.2225	8
9	WEST	-.90	.00	.0	5.0	1.9626	1.9626	9
10	WEST	-1.00	.00	.0	5.0	1.7866	1.7866	10
11	WEST	-1.20	.00	.0	5.0	1.5222	1.5222	11
12	WEST	-1.50	.00	.0	5.0	1.2515	1.2515	12
13	WEST	-2.00	.00	.0	5.0	.9730	.9730	13
14	WEST	-2.50	.00	.0	5.0	.8008	.8008	14
15	WEST	-3.00	.00	.0	5.0	.6833	.6833	15
16	WEST	-4.00	.00	.0	5.0	.5324	.5324	16
17	WEST	-5.00	.00	.0	5.0	.4390	.4390	17

HOUR	THETA (DEG)	SPEED (M/S)	MIXING HEIGHT(M)	TEMP (K)	STABILITY CLASS
7	90.00	1.00	300.00	298.00	2

FINAL HT (M) 153.79

DIST FIN HT (KM) .246

0 RECEPTOR NO.	NAME	EAST COORD	NORTH COORD	RECEPTOR HT ABV GRD (M)	RECEPTOR GRD-LVL ELEV (USER HT UNITS)	TOTAL FROM SIGNIF POINT SOURCES	TOTAL FROM ALL SOURCES	CONCENTRATION RANK
1	WEST	-.10	.00	.0	5.0	2.0066	2.0066	15
2	WEST	-.20	.00	.0	5.0	1.1642	1.1642	17
3	WEST	-.30	.00	.0	5.0	1.4356	1.4356	16
4	WEST	-.40	.00	.0	5.0	2.5382	2.5382	13
5	WEST	-.50	.00	.0	5.0	4.1294	4.1294	9
6	WEST	-.60	.00	.0	5.0	5.6979	5.6979	7
7	WEST	-.70	.00	.0	5.0	6.9086	6.9086	5
8	WEST	-.80	.00	.0	5.0	7.6407	7.6407	3
9	WEST	-.90	.00	.0	5.0	7.9387	7.9387	1
10	WEST	-1.00	.00	.0	5.0	7.9161	7.9161	2
11	WEST	-1.20	.00	.0	5.0	7.3611	7.3611	4
12	WEST	-1.50	.00	.0	5.0	6.2682	6.2682	6
13	WEST	-2.00	.00	.0	5.0	4.9184	4.9184	8
14	WEST	-2.50	.00	.0	5.0	4.0544	4.0544	10
15	WEST	-3.00	.00	.0	5.0	3.4584	3.4584	11
16	WEST	-4.00	.00	.0	5.0	2.6897	2.6897	12
17	WEST	-5.00	.00	.0	5.0	2.2134	2.2134	14

HOUR	THETA (DEG)	SPEED (M/S)	MIXING HEIGHT(M)	TEMP (K)	STABILITY CLASS
8	90.00	1.50	300.00	298.00	2

FINAL HT (M) 109.13

DIST FIN HT (KM) .246

0 RECEPTOR NO.	NAME	EAST COORD	NORTH COORD	RECEPTOR HT ABV GRD (M)	RECEPTOR GRD-LVL ELEV (USER HT UNITS)	TOTAL FROM SIGNIF POINT SOURCES	TOTAL FROM ALL SOURCES	CONCENTRATION RANK
1	WEST	-.10	.00	.0	5.0	4.4578	4.4578	10
2	WEST	-.20	.00	.0	5.0	2.9417	2.9417	13
3	WEST	-.30	.00	.0	5.0	3.9376	3.9376	11
4	WEST	-.40	.00	.0	5.0	6.5645	6.5645	8
5	WEST	-.50	.00	.0	5.0	9.0158	9.0158	5
6	WEST	-.60	.00	.0	5.0	10.2960	10.2960	2
7	WEST	-.70	.00	.0	5.0	10.5449	10.5449	1
8	WEST	-.80	.00	.0	5.0	10.1497	10.1497	3
9	WEST	-.90	.00	.0	5.0	9.4356	9.4356	4
10	WEST	-1.00	.00	.0	5.0	8.6084	8.6084	6
11	WEST	-1.20	.00	.0	5.0	7.0105	7.0105	7
12	WEST	-1.50	.00	.0	5.0	5.2084	5.2084	9
13	WEST	-2.00	.00	.0	5.0	3.6099	3.6099	12
14	WEST	-2.50	.00	.0	5.0	2.8664	2.8664	14
15	WEST	-3.00	.00	.0	5.0	2.4283	2.4283	15
16	WEST	-4.00	.00	.0	5.0	1.8854	1.8854	16
17	WEST	-5.00	.00	.0	5.0	1.5507	1.5507	17

HOUR	THETA (DEG)	SPEED (M/S)	MIXING HEIGHT(M)	TEMP (K)	STABILITY CLASS
9	90.00	2.00	300.00	298.00	2

FINAL HT (M) 83.10

DIST FIN HT (KM) .246

0	RECEPTOR NO.	NAME	EAST COORD	NORTH COORD	RECEPTOR HT ABV GRD (M)	RECEPTOR GRD-LVL ELEV (USER HT UNITS)	TOTAL FROM SIGNIF POINT SOURCES	TOTAL FROM ALL SOURCES	CONCENTRATION RANK
	1	WEST	-.10	.00	.0	5.0	9.6286	9.6286	6
	2	WEST	-.20	.00	.0	5.0	6.6107	6.6107	10
	3	WEST	-.30	.00	.0	5.0	8.3416	8.3416	8
	4	WEST	-.40	.00	.0	5.0	11.6444	11.6444	4
	5	WEST	-.50	.00	.0	5.0	13.1586	13.1586	1
	6	WEST	-.60	.00	.0	5.0	12.8744	12.8744	2
	7	WEST	-.70	.00	.0	5.0	11.7607	11.7607	3
	8	WEST	-.80	.00	.0	5.0	10.4116	10.4116	5
	9	WEST	-.90	.00	.0	5.0	9.1000	9.1000	7
	10	WEST	-1.00	.00	.0	5.0	7.9267	7.9267	9
	11	WEST	-1.20	.00	.0	5.0	6.0574	6.0574	11
	12	WEST	-1.50	.00	.0	5.0	4.2378	4.2378	12
	13	WEST	-2.00	.00	.0	5.0	2.7733	2.7733	13
	14	WEST	-2.50	.00	.0	5.0	2.1606	2.1606	14
	15	WEST	-3.00	.00	.0	5.0	1.8239	1.8239	15
	16	WEST	-4.00	.00	.0	5.0	1.4150	1.4150	16
	17	WEST	-5.00	.00	.0	5.0	1.1635	1.1635	17

HOUR	THETA (DEG)	SPEED (M/S)	MIXING HEIGHT(M)	TEMP (K)	STABILITY CLASS
10	90.00	2.50	300.00	298.00	2

FINAL HT (M) 67.48

DIST FIN HT (KM) .246

0	RECEPTOR NO.	NAME	EAST COORD	NORTH COORD	RECEPTOR HT ABV GRD (M)	RECEPTOR GRD-LVL ELEV (USER HT UNITS)	TOTAL FROM SIGNIF POINT SOURCES	TOTAL FROM ALL SOURCES	CONCENTRATION RANK
	1	WEST	-.10	.00	.0	5.0	17.9071	17.9071	1
	2	WEST	-.20	.00	.0	5.0	11.8665	11.8665	6
	3	WEST	-.30	.00	.0	5.0	13.2495	13.2495	5
	4	WEST	-.40	.00	.0	5.0	15.5217	15.5217	2
	5	WEST	-.50	.00	.0	5.0	15.1828	15.1828	3
	6	WEST	-.60	.00	.0	5.0	13.4684	13.4684	4
	7	WEST	-.70	.00	.0	5.0	11.5142	11.5142	7
	8	WEST	-.80	.00	.0	5.0	9.7368	9.7368	8
	9	WEST	-.90	.00	.0	5.0	8.2377	8.2377	9
	10	WEST	-1.00	.00	.0	5.0	7.0071	7.0071	10
	11	WEST	-1.20	.00	.0	5.0	5.1879	5.1879	11
	12	WEST	-1.50	.00	.0	5.0	3.5272	3.5272	12
	13	WEST	-2.00	.00	.0	5.0	2.2455	2.2455	13
	14	WEST	-2.50	.00	.0	5.0	1.7328	1.7328	14
	15	WEST	-3.00	.00	.0	5.0	1.4601	1.4601	15
	16	WEST	-4.00	.00	.0	5.0	1.1324	1.1324	16
	17	WEST	-5.00	.00	.0	5.0	.9310	.9310	17

HOUR	THETA (DEG)	SPEED (M/S)	MIXING HEIGHT(M)	TEMP (K)	STABILITY CLASS
11	90.00	3.00	300.00	298.00	2

FINAL HT (M) 57.06

DIST FIN HT (KM) .246

0

RECEPTOR NO.	NAME	EAST COORD	NORTH COORD	RECEPTOR HT ABV GRD (M)	RECEPTOR GRD-LVL ELEV (USER HT UNITS)	TOTAL FROM SIGNIF POINT SOURCES	TOTAL FROM ALL SOURCES	CONCENTRATION RANK
1	WEST	-.10	.00	.0	5.0	28.8435	28.8435	1
2	WEST	-.20	.00	.0	5.0	17.8203	17.8203	2
3	WEST	-.30	.00	.0	5.0	17.4932	17.4932	4
4	WEST	-.40	.00	.0	5.0	17.7950	17.7950	3
5	WEST	-.50	.00	.0	5.0	15.7460	15.7460	5
6	WEST	-.60	.00	.0	5.0	13.1189	13.1189	6
7	WEST	-.70	.00	.0	5.0	10.7704	10.7704	7
8	WEST	-.80	.00	.0	5.0	8.8636	8.8636	8
9	WEST	-.90	.00	.0	5.0	7.3582	7.3582	9
10	WEST	-1.00	.00	.0	5.0	6.1742	6.1742	10
11	WEST	-1.20	.00	.0	5.0	4.4902	4.4902	11
12	WEST	-1.50	.00	.0	5.0	3.0050	3.0050	12
13	WEST	-2.00	.00	.0	5.0	1.8840	1.8840	13
14	WEST	-2.50	.00	.0	5.0	1.4460	1.4460	14
15	WEST	-3.00	.00	.0	5.0	1.2172	1.2172	15
16	WEST	-4.00	.00	.0	5.0	.9438	.9438	16
17	WEST	-5.00	.00	.0	5.0	.7760	.7760	17

HOUR	THETA (DEG)	SPEED (M/S)	MIXING HEIGHT(M)	TEMP (K)	STABILITY CLASS
12	90.00	4.00	300.00	298.00	2

FINAL HT (M) 44.05

DIST FIN HT (KM) .246

0

RECEPTOR NO.	NAME	EAST COORD	NORTH COORD	RECEPTOR HT ABV GRD (M)	RECEPTOR GRD-LVL ELEV (USER HT UNITS)	TOTAL FROM SIGNIF POINT SOURCES	TOTAL FROM ALL SOURCES	CONCENTRATION RANK
1	WEST	-.10	.00	.0	5.0	53.6645	53.6645	1
2	WEST	-.20	.00	.0	5.0	28.3774	28.3774	2
3	WEST	-.30	.00	.0	5.0	22.5921	22.5921	3
4	WEST	-.40	.00	.0	5.0	19.0218	19.0218	4
5	WEST	-.50	.00	.0	5.0	14.9288	14.9288	5
6	WEST	-.60	.00	.0	5.0	11.5906	11.5906	6
7	WEST	-.70	.00	.0	5.0	9.1061	9.1061	7
8	WEST	-.80	.00	.0	5.0	7.2803	7.2803	8
9	WEST	-.90	.00	.0	5.0	5.9249	5.9249	9
10	WEST	-1.00	.00	.0	5.0	4.9015	4.9015	10
11	WEST	-1.20	.00	.0	5.0	3.4996	3.4996	11
12	WEST	-1.50	.00	.0	5.0	2.3049	2.3049	12
13	WEST	-2.00	.00	.0	5.0	1.4229	1.4229	13
14	WEST	-2.50	.00	.0	5.0	1.0860	1.0860	14
15	WEST	-3.00	.00	.0	5.0	.9133	.9133	15
16	WEST	-4.00	.00	.0	5.0	.7080	.7080	16
17	WEST	-5.00	.00	.0	5.0	.5820	.5820	17

HOUR	THETA (DEG)	SPEED (M/S)	MIXING HEIGHT(M)	TEMP (K)	STABILITY CLASS
13	90.00	5.00	300.00	298.00	2

FINAL HT (M) 35.88

DIST FIN HT (KM) .246

0 RECEPTOR NO.	NAME	EAST COORD	NORTH COORD	RECEPTOR HT ABV GRD (M)	RECEPTOR GRD-LVL ELEV (USER HT UNITS)	TOTAL FROM SIGNIF POINT SOURCES	TOTAL FROM ALL SOURCES	CONCENTRATION RANK
1	WEST	-.10	.00	.0	5.0	78.9821	78.9821	1
2	WEST	-.20	.00	.0	5.0	35.7021	35.7021	2
3	WEST	-.30	.00	.0	5.0	24.4404	24.4404	3
4	WEST	-.40	.00	.0	5.0	18.3421	18.3421	4
5	WEST	-.50	.00	.0	5.0	13.4651	13.4651	5
6	WEST	-.60	.00	.0	5.0	10.0699	10.0699	6
7	WEST	-.70	.00	.0	5.0	7.7335	7.7335	7
8	WEST	-.80	.00	.0	5.0	6.0926	6.0926	8
9	WEST	-.90	.00	.0	5.0	4.9090	4.9090	9
10	WEST	-1.00	.00	.0	5.0	4.0324	4.0324	10
11	WEST	-1.20	.00	.0	5.0	2.8530	2.8530	11
12	WEST	-1.50	.00	.0	5.0	1.8644	1.8644	12
13	WEST	-2.00	.00	.0	5.0	1.1423	1.1423	13
14	WEST	-2.50	.00	.0	5.0	.8694	.8694	14
15	WEST	-3.00	.00	.0	5.0	.7307	.7307	15
16	WEST	-4.00	.00	.0	5.0	.5664	.5664	16
17	WEST	-5.00	.00	.0	5.0	.4657	.4657	17

HOUR	THETA (DEG)	SPEED (M/S)	MIXING HEIGHT(M)	TEMP (K)	STABILITY CLASS
14	90.00	2.00	300.00	298.00	3

FINAL HT (M) 84.74

DIST FIN HT (KM) .246

0 RECEPTOR NO.	NAME	EAST COORD	NORTH COORD	RECEPTOR HT ABV GRD (M)	RECEPTOR GRD-LVL ELEV (USER HT UNITS)	TOTAL FROM SIGNIF POINT SOURCES	TOTAL FROM ALL SOURCES	CONCENTRATION RANK
1	WEST	-.10	.00	.0	5.0	4.5519	4.5519	12
2	WEST	-.20	.00	.0	5.0	3.0502	3.0502	15
3	WEST	-.30	.00	.0	5.0	3.8606	3.8606	13
4	WEST	-.40	.00	.0	5.0	6.5022	6.5022	9
5	WEST	-.50	.00	.0	5.0	9.0202	9.0202	7
6	WEST	-.60	.00	.0	5.0	10.8869	10.8869	5
7	WEST	-.70	.00	.0	5.0	11.9738	11.9738	3
8	WEST	-.80	.00	.0	5.0	12.3951	12.3951	1
9	WEST	-.90	.00	.0	5.0	12.3370	12.3370	2
10	WEST	-1.00	.00	.0	5.0	11.9709	11.9709	4
11	WEST	-1.20	.00	.0	5.0	10.7936	10.7936	6
12	WEST	-1.50	.00	.0	5.0	8.8336	8.8336	8
13	WEST	-2.00	.00	.0	5.0	6.2432	6.2432	10
14	WEST	-2.50	.00	.0	5.0	4.5538	4.5538	11
15	WEST	-3.00	.00	.0	5.0	3.4699	3.4699	14
16	WEST	-4.00	.00	.0	5.0	2.3056	2.3056	16
17	WEST	-5.00	.00	.0	5.0	1.7688	1.7688	17

HOUR	THETA (DEG)	SPEED (M/S)	MIXING HEIGHT(M)	TEMP (K)	STABILITY CLASS
15	90.00	2.50	300.00	298.00	3

FINAL HT (M) 68.79

DIST FIN HT (KM) .246

0	RECEPTOR NO.	NAME	EAST COORD	NORTH COORD	RECEPTOR HT ABV GRD (M)	RECEPTOR GRD-LVL ELEV (USER HT UNITS)	TOTAL FROM SIGNIF POINT SOURCES	TOTAL FROM ALL SOURCES	CONCENTRATION RANK
	1	WEST	-.10	.00	.0	5.0	7.9670	7.9670	10
	2	WEST	-.20	.00	.0	5.0	5.6837	5.6837	12
	3	WEST	-.30	.00	.0	5.0	7.2248	7.2248	11
	4	WEST	-.40	.00	.0	5.0	11.2037	11.2037	7
	5	WEST	-.50	.00	.0	5.0	13.9014	13.9014	4
	6	WEST	-.60	.00	.0	5.0	15.1079	15.1079	2
	7	WEST	-.70	.00	.0	5.0	15.2086	15.2086	1
	8	WEST	-.80	.00	.0	5.0	14.6494	14.6494	3
	9	WEST	-.90	.00	.0	5.0	13.7586	13.7586	5
	10	WEST	-1.00	.00	.0	5.0	12.7396	12.7396	6
	11	WEST	-1.20	.00	.0	5.0	10.7192	10.7192	8
	12	WEST	-1.50	.00	.0	5.0	8.2184	8.2184	9
	13	WEST	-2.00	.00	.0	5.0	5.4806	5.4806	13
	14	WEST	-2.50	.00	.0	5.0	3.8773	3.8773	14
	15	WEST	-3.00	.00	.0	5.0	2.8970	2.8970	15
	16	WEST	-4.00	.00	.0	5.0	1.8766	1.8766	16
	17	WEST	-5.00	.00	.0	5.0	1.4225	1.4225	17

HOUR	THETA (DEG)	SPEED (M/S)	MIXING HEIGHT(M)	TEMP (K)	STABILITY CLASS
16	90.00	3.00	300.00	298.00	3

FINAL HT (M) 58.16

DIST FIN HT (KM) .246

0	RECEPTOR NO.	NAME	EAST COORD	NORTH COORD	RECEPTOR HT ABV GRD (M)	RECEPTOR GRD-LVL ELEV (USER HT UNITS)	TOTAL FROM SIGNIF POINT SOURCES	TOTAL FROM ALL SOURCES	CONCENTRATION RANK
	1	WEST	-.10	.00	.0	5.0	13.1283	13.1283	7
	2	WEST	-.20	.00	.0	5.0	9.5090	9.5090	11
	3	WEST	-.30	.00	.0	5.0	11.5346	11.5346	9
	4	WEST	-.40	.00	.0	5.0	15.9999	15.9999	4
	5	WEST	-.50	.00	.0	5.0	17.8679	17.8679	1
	6	WEST	-.60	.00	.0	5.0	17.8482	17.8482	2
	7	WEST	-.70	.00	.0	5.0	16.8406	16.8406	3
	8	WEST	-.80	.00	.0	5.0	15.4383	15.4383	5
	9	WEST	-.90	.00	.0	5.0	13.9567	13.9567	6
	10	WEST	-1.00	.00	.0	5.0	12.5435	12.5435	8
	11	WEST	-1.20	.00	.0	5.0	10.1138	10.1138	10
	12	WEST	-1.50	.00	.0	5.0	7.4590	7.4590	12
	13	WEST	-2.00	.00	.0	5.0	4.8101	4.8101	13
	14	WEST	-2.50	.00	.0	5.0	3.3450	3.3450	14
	15	WEST	-3.00	.00	.0	5.0	2.4723	2.4723	15
	16	WEST	-4.00	.00	.0	5.0	1.5792	1.5792	16
	17	WEST	-5.00	.00	.0	5.0	1.1890	1.1890	17

HOUR	THETA (DEG)	SPEED (M/S)	MIXING HEIGHT(M)	TEMP (K)	STABILITY CLASS
17	90.00	4.00	300.00	298.00	3

FINAL HT (M) 44.87

DIST FIN HT (KM) .246

0	RECEPTOR NO.	NAME	EAST COORD	NORTH COORD	RECEPTOR HT ABV GRD (M)	RECEPTOR GRD-LVL ELEV (USER HT UNITS)	TOTAL FROM SIGNIF POINT SOURCES	TOTAL FROM ALL SOURCES	CONCENTRATION RANK
	1	WEST	-.10	.00	.0	5.0	29.0867	29.0867	1
	2	WEST	-.20	.00	.0	5.0	19.8941	19.8941	5
	3	WEST	-.30	.00	.0	5.0	20.7523	20.7523	4
	4	WEST	-.40	.00	.0	5.0	23.2995	23.2995	2
	5	WEST	-.50	.00	.0	5.0	22.2033	22.2033	3
	6	WEST	-.60	.00	.0	5.0	19.8142	19.8142	6
	7	WEST	-.70	.00	.0	5.0	17.2491	17.2491	7
	8	WEST	-.80	.00	.0	5.0	14.9113	14.9113	8
	9	WEST	-.90	.00	.0	5.0	12.9027	12.9027	9
	10	WEST	-1.00	.00	.0	5.0	11.2153	11.2153	10
	11	WEST	-1.20	.00	.0	5.0	8.6310	8.6310	11
	12	WEST	-1.50	.00	.0	5.0	6.1073	6.1073	12
	13	WEST	-2.00	.00	.0	5.0	3.8031	3.8031	13
	14	WEST	-2.50	.00	.0	5.0	2.5985	2.5985	14
	15	WEST	-3.00	.00	.0	5.0	1.8997	1.8997	15
	16	WEST	-4.00	.00	.0	5.0	1.1963	1.1963	16
	17	WEST	-5.00	.00	.0	5.0	.8945	.8945	17

HOUR	THETA (DEG)	SPEED (M/S)	MIXING HEIGHT(M)	TEMP (K)	STABILITY CLASS
18	90.00	5.00	300.00	298.00	3

FINAL HT (M) 36.66

DIST FIN HT (KM) .246

0	RECEPTOR NO.	NAME	EAST COORD	NORTH COORD	RECEPTOR HT ABV GRD (M)	RECEPTOR GRD-LVL ELEV (USER HT UNITS)	TOTAL FROM SIGNIF POINT SOURCES	TOTAL FROM ALL SOURCES	CONCENTRATION RANK
	1	WEST	-.10	.00	.0	5.0	53.5792	53.5792	1
	2	WEST	-.20	.00	.0	5.0	32.0809	32.0809	2
	3	WEST	-.30	.00	.0	5.0	28.5104	28.5104	3
	4	WEST	-.40	.00	.0	5.0	27.1766	27.1766	4
	5	WEST	-.50	.00	.0	5.0	23.3444	23.3444	5
	6	WEST	-.60	.00	.0	5.0	19.4752	19.4752	6
	7	WEST	-.70	.00	.0	5.0	16.1994	16.1994	7
	8	WEST	-.80	.00	.0	5.0	13.5628	13.5628	8
	9	WEST	-.90	.00	.0	5.0	11.4658	11.4658	9
	10	WEST	-1.00	.00	.0	5.0	9.7940	9.7940	10
	11	WEST	-1.20	.00	.0	5.0	7.3593	7.3593	11
	12	WEST	-1.50	.00	.0	5.0	5.1002	5.1002	12
	13	WEST	-2.00	.00	.0	5.0	3.1214	3.1214	13
	14	WEST	-2.50	.00	.0	5.0	2.1146	2.1146	14
	15	WEST	-3.00	.00	.0	5.0	1.5377	1.5377	15
	16	WEST	-4.00	.00	.0	5.0	.9618	.9618	16
	17	WEST	-5.00	.00	.0	5.0	.7167	.7167	17

HOUR	THETA (DEG)	SPEED (M/S)	MIXING HEIGHT(M)	TEMP (K)	STABILITY CLASS
19	90.00	7.00	300.00	298.00	3

FINAL HT (M) 25.90

DIST FIN HT (KM) .246

0

RECEPTOR NO.	NAME	EAST COORD	NORTH COORD	RECEPTOR HT ABV GRD (M)	RECEPTOR GRD-LVL ELEV (USER HT UNITS)	TOTAL FROM SIGNIF POINT SOURCES	TOTAL FROM ALL SOURCES	CONCENTRATION RANK
1	WEST	-.10	.00	.0	5.0	138.1713	138.1713	1
2	WEST	-.20	.00	.0	5.0	56.9650	56.9650	2
3	WEST	-.30	.00	.0	5.0	38.3840	38.3840	3
4	WEST	-.40	.00	.0	5.0	29.3412	29.3412	4
5	WEST	-.50	.00	.0	5.0	22.2557	22.2557	5
6	WEST	-.60	.00	.0	5.0	17.2111	17.2111	6
7	WEST	-.70	.00	.0	5.0	13.6266	13.6266	7
8	WEST	-.80	.00	.0	5.0	11.0289	11.0289	8
9	WEST	-.90	.00	.0	5.0	9.1005	9.1005	9
10	WEST	-1.00	.00	.0	5.0	7.6355	7.6355	10
11	WEST	-1.20	.00	.0	5.0	5.5997	5.5997	11
12	WEST	-1.50	.00	.0	5.0	3.8006	3.8006	12
13	WEST	-2.00	.00	.0	5.0	2.2864	2.2864	13
14	WEST	-2.50	.00	.0	5.0	1.5358	1.5358	14
15	WEST	-3.00	.00	.0	5.0	1.1111	1.1111	15
16	WEST	-4.00	.00	.0	5.0	.6903	.6903	16
17	WEST	-5.00	.00	.0	5.0	.5127	.5127	17

HOUR	THETA (DEG)	SPEED (M/S)	MIXING HEIGHT(M)	TEMP (K)	STABILITY CLASS
20	90.00	8.00	300.00	298.00	3

FINAL HT (M) 22.54

DIST FIN HT (KM) .246

0

RECEPTOR NO.	NAME	EAST COORD	NORTH COORD	RECEPTOR HT ABV GRD (M)	RECEPTOR GRD-LVL ELEV (USER HT UNITS)	TOTAL FROM SIGNIF POINT SOURCES	TOTAL FROM ALL SOURCES	CONCENTRATION RANK
1	WEST	-.10	.00	.0	5.0	172.9690	172.9690	1
2	WEST	-.20	.00	.0	5.0	63.8872	63.8872	2
3	WEST	-.30	.00	.0	5.0	39.6335	39.6335	3
4	WEST	-.40	.00	.0	5.0	28.4859	28.4859	4
5	WEST	-.50	.00	.0	5.0	20.9116	20.9116	5
6	WEST	-.60	.00	.0	5.0	15.8624	15.8624	6
7	WEST	-.70	.00	.0	5.0	12.4048	12.4048	7
8	WEST	-.80	.00	.0	5.0	9.9565	9.9565	8
9	WEST	-.90	.00	.0	5.0	8.1671	8.1671	9
10	WEST	-1.00	.00	.0	5.0	6.8225	6.8225	10
11	WEST	-1.20	.00	.0	5.0	4.9742	4.9742	11
12	WEST	-1.50	.00	.0	5.0	3.3592	3.3592	12
13	WEST	-2.00	.00	.0	5.0	2.0126	2.0126	13
14	WEST	-2.50	.00	.0	5.0	1.3492	1.3492	14
15	WEST	-3.00	.00	.0	5.0	.9749	.9749	15
16	WEST	-4.00	.00	.0	5.0	.6047	.6047	16
17	WEST	-5.00	.00	.0	5.0	.4488	.4488	17

HOUR	THETA (DEG)	SPEED (M/S)	MIXING HEIGHT(M)	TEMP (K)	STABILITY CLASS
21	90.00	9.00	300.00	298.00	3

FINAL HT (M) 19.92

DIST FIN HT (KM) .246

0	RECEPTOR NO.	NAME	EAST COORD	NORTH COORD	RECEPTOR HT ABV GRD (M)	RECEPTOR GRD-LVL ELEV (USER HT UNITS)	TOTAL FROM SIGNIF POINT SOURCES	TOTAL FROM ALL SOURCES	CONCENTRATION RANK
	1	WEST	-.10	.00	.0	5.0	198.1097	198.1097	1
	2	WEST	-.20	.00	.0	5.0	67.6583	67.6583	2
	3	WEST	-.30	.00	.0	5.0	39.5287	39.5287	3
	4	WEST	-.40	.00	.0	5.0	27.1929	27.1929	4
	5	WEST	-.50	.00	.0	5.0	19.5128	19.5128	5
	6	WEST	-.60	.00	.0	5.0	14.6058	14.6058	6
	7	WEST	-.70	.00	.0	5.0	11.3262	11.3262	7
	8	WEST	-.80	.00	.0	5.0	9.0391	9.0391	8
	9	WEST	-.90	.00	.0	5.0	7.3848	7.3848	9
	10	WEST	-1.00	.00	.0	5.0	6.1508	6.1508	10
	11	WEST	-1.20	.00	.0	5.0	4.4667	4.4667	11
	12	WEST	-1.50	.00	.0	5.0	3.0062	3.0062	12
	13	WEST	-2.00	.00	.0	5.0	1.7962	1.7962	13
	14	WEST	-2.50	.00	.0	5.0	1.2025	1.2025	14
	15	WEST	-3.00	.00	.0	5.0	.8682	.8682	15
	16	WEST	-4.00	.00	.0	5.0	.5379	.5379	16
	17	WEST	-5.00	.00	.0	5.0	.3990	.3990	17

HOUR	THETA (DEG)	SPEED (M/S)	MIXING HEIGHT(M)	TEMP (K)	STABILITY CLASS
22	90.00	10.00	300.00	298.00	3

FINAL HT (M) 17.83

DIST FIN HT (KM) .246

0	RECEPTOR NO.	NAME	EAST COORD	NORTH COORD	RECEPTOR HT ABV GRD (M)	RECEPTOR GRD-LVL ELEV (USER HT UNITS)	TOTAL FROM SIGNIF POINT SOURCES	TOTAL FROM ALL SOURCES	CONCENTRATION RANK
	1	WEST	-.10	.00	.0	5.0	214.1776	214.1776	1
	2	WEST	-.20	.00	.0	5.0	69.1351	69.1351	2
	3	WEST	-.30	.00	.0	5.0	38.6417	38.6417	3
	4	WEST	-.40	.00	.0	5.0	25.7472	25.7472	4
	5	WEST	-.50	.00	.0	5.0	18.1755	18.1755	5
	6	WEST	-.60	.00	.0	5.0	13.4764	13.4764	6
	7	WEST	-.70	.00	.0	5.0	10.3880	10.3880	7
	8	WEST	-.80	.00	.0	5.0	8.2570	8.2570	8
	9	WEST	-.90	.00	.0	5.0	6.7267	6.7267	9
	10	WEST	-1.00	.00	.0	5.0	5.5910	5.5910	10
	11	WEST	-1.20	.00	.0	5.0	4.0489	4.0489	11
	12	WEST	-1.50	.00	.0	5.0	2.7185	2.7185	12
	13	WEST	-2.00	.00	.0	5.0	1.6211	1.6211	13
	14	WEST	-2.50	.00	.0	5.0	1.0842	1.0842	14
	15	WEST	-3.00	.00	.0	5.0	.7823	.7823	15
	16	WEST	-4.00	.00	.0	5.0	.4844	.4844	16
	17	WEST	-5.00	.00	.0	5.0	.3592	.3592	17

HOUR	THETA (DEG)	SPEED (M/S)	MIXING HEIGHT(M)	TEMP (K)	STABILITY CLASS
21	90.00	9.00	300.00	298.00	3

FINAL HT (M) 19.92

DIST FIN HT (KM) .246

0

RECEPTOR NO.	NAME	EAST COORD	NORTH COORD	RECEPTOR HT ABV GRD (M)	RECEPTOR GRD-LVL ELEV (USER HT UNITS)	TOTAL FROM SIGNIF POINT SOURCES	TOTAL FROM ALL SOURCES	CONCENTRATION RANK
1	WEST	-.10	.00	.0	5.0	198.1097	198.1097	1
2	WEST	-.20	.00	.0	5.0	67.6583	67.6583	2
3	WEST	-.30	.00	.0	5.0	39.5287	39.5287	3
4	WEST	-.40	.00	.0	5.0	27.1929	27.1929	4
5	WEST	-.50	.00	.0	5.0	19.5128	19.5128	5
6	WEST	-.60	.00	.0	5.0	14.6058	14.6058	6
7	WEST	-.70	.00	.0	5.0	11.3262	11.3262	7
8	WEST	-.80	.00	.0	5.0	9.0391	9.0391	8
9	WEST	-.90	.00	.0	5.0	7.3848	7.3848	9
10	WEST	-1.00	.00	.0	5.0	6.1508	6.1508	10
11	WEST	-1.20	.00	.0	5.0	4.4667	4.4667	11
12	WEST	-1.50	.00	.0	5.0	3.0062	3.0062	12
13	WEST	-2.00	.00	.0	5.0	1.7962	1.7962	13
14	WEST	-2.50	.00	.0	5.0	1.2025	1.2025	14
15	WEST	-3.00	.00	.0	5.0	.8682	.8682	15
16	WEST	-4.00	.00	.0	5.0	.5379	.5379	16
17	WEST	-5.00	.00	.0	5.0	.3990	.3990	17

HOUR	THETA (DEG)	SPEED (M/S)	MIXING HEIGHT(M)	TEMP (K)	STABILITY CLASS
22	90.00	10.00	300.00	298.00	3

FINAL HT (M) 17.83

DIST FIN HT (KM) .246

0

RECEPTOR NO.	NAME	EAST COORD	NORTH COORD	RECEPTOR HT ABV GRD (M)	RECEPTOR GRD-LVL ELEV (USER HT UNITS)	TOTAL FROM SIGNIF POINT SOURCES	TOTAL FROM ALL SOURCES	CONCENTRATION RANK
1	WEST	-.10	.00	.0	5.0	214.1776	214.1776	1
2	WEST	-.20	.00	.0	5.0	69.1351	69.1351	2
3	WEST	-.30	.00	.0	5.0	38.6417	38.6417	3
4	WEST	-.40	.00	.0	5.0	25.7472	25.7472	4
5	WEST	-.50	.00	.0	5.0	18.1755	18.1755	5
6	WEST	-.60	.00	.0	5.0	13.4764	13.4764	6
7	WEST	-.70	.00	.0	5.0	10.3880	10.3880	7
8	WEST	-.80	.00	.0	5.0	8.2570	8.2570	8
9	WEST	-.90	.00	.0	5.0	6.7267	6.7267	9
10	WEST	-1.00	.00	.0	5.0	5.5910	5.5910	10
11	WEST	-1.20	.00	.0	5.0	4.0489	4.0489	11
12	WEST	-1.50	.00	.0	5.0	2.7185	2.7185	12
13	WEST	-2.00	.00	.0	5.0	1.6211	1.6211	13
14	WEST	-2.50	.00	.0	5.0	1.0842	1.0842	14
15	WEST	-3.00	.00	.0	5.0	.7823	.7823	15
16	WEST	-4.00	.00	.0	5.0	.4844	.4844	16
17	WEST	-5.00	.00	.0	5.0	.3592	.3592	17

HOUR	THETA (DEG)	SPEED (M/S)	MIXING HEIGHT(M)	TEMP (K)	STABILITY CLASS
21	90.00	9.00	300.00	298.00	3

FINAL HT (M) 19.92

DIST FIN HT (KM) .246

0 RECEPTOR NO.	NAME	EAST COORD	NORTH COORD	RECEPTOR HT ABV GRD (M)	RECEPTOR GRD-LVL ELEV (USER HT UNITS)	TOTAL FROM SIGNIF POINT SOURCES	TOTAL FROM ALL SOURCES	CONCENTRATION RANK
1	WEST	-.10	.00	.0	5.0	198.1097	198.1097	1
2	WEST	-.20	.00	.0	5.0	67.6583	67.6583	2
3	WEST	-.30	.00	.0	5.0	39.5287	39.5287	3
4	WEST	-.40	.00	.0	5.0	27.1929	27.1929	4
5	WEST	-.50	.00	.0	5.0	19.5128	19.5128	5
6	WEST	-.60	.00	.0	5.0	14.6058	14.6058	6
7	WEST	-.70	.00	.0	5.0	11.3262	11.3262	7
8	WEST	-.80	.00	.0	5.0	9.0391	9.0391	8
9	WEST	-.90	.00	.0	5.0	7.3848	7.3848	9
10	WEST	-1.00	.00	.0	5.0	6.1508	6.1508	10
11	WEST	-1.20	.00	.0	5.0	4.4667	4.4667	11
12	WEST	-1.50	.00	.0	5.0	3.0062	3.0062	12
13	WEST	-2.00	.00	.0	5.0	1.7962	1.7962	13
14	WEST	-2.50	.00	.0	5.0	1.2025	1.2025	14
15	WEST	-3.00	.00	.0	5.0	.8682	.8682	15
16	WEST	-4.00	.00	.0	5.0	.5379	.5379	16
17	WEST	-5.00	.00	.0	5.0	.3990	.3990	17

HOUR	THETA (DEG)	SPEED (M/S)	MIXING HEIGHT(M)	TEMP (K)	STABILITY CLASS
22	90.00	10.00	300.00	298.00	3

FINAL HT (M) 17.83

DIST FIN HT (KM) .246

0 RECEPTOR NO.	NAME	EAST COORD	NORTH COORD	RECEPTOR HT ABV GRD (M)	RECEPTOR GRD-LVL ELEV (USER HT UNITS)	TOTAL FROM SIGNIF POINT SOURCES	TOTAL FROM ALL SOURCES	CONCENTRATION RANK
1	WEST	-.10	.00	.0	5.0	214.1776	214.1776	1
2	WEST	-.20	.00	.0	5.0	69.1351	69.1351	2
3	WEST	-.30	.00	.0	5.0	38.6417	38.6417	3
4	WEST	-.40	.00	.0	5.0	25.7472	25.7472	4
5	WEST	-.50	.00	.0	5.0	18.1755	18.1755	5
6	WEST	-.60	.00	.0	5.0	13.4764	13.4764	6
7	WEST	-.70	.00	.0	5.0	10.3880	10.3880	7
8	WEST	-.80	.00	.0	5.0	8.2570	8.2570	8
9	WEST	-.90	.00	.0	5.0	6.7267	6.7267	9
10	WEST	-1.00	.00	.0	5.0	5.5910	5.5910	10
11	WEST	-1.20	.00	.0	5.0	4.0489	4.0489	11
12	WEST	-1.50	.00	.0	5.0	2.7185	2.7185	12
13	WEST	-2.00	.00	.0	5.0	1.6211	1.6211	13
14	WEST	-2.50	.00	.0	5.0	1.0842	1.0842	14
15	WEST	-3.00	.00	.0	5.0	.7823	.7823	15
16	WEST	-4.00	.00	.0	5.0	.4844	.4844	16
17	WEST	-5.00	.00	.0	5.0	.3592	.3592	17

HOUR	THETA (DEG)	SPEED (M/S)	MIXING HEIGHT(M)	TEMP (K)	STABILITY CLASS
23	90.00	1.00	300.00	298.00	4

FINAL HT (M) 153.79

DIST FIN HT (KM) .246

0	RECEPTOR NO.	NAME	EAST COORD	NORTH COORD	RECEPTOR HT ABV GRD (M)	RECEPTOR GRD-LVL ELEV (USER HT UNITS)	TOTAL FROM SIGNIF POINT SOURCES	TOTAL FROM ALL SOURCES	CONCENTRATION RANK
	1	WEST	-.10	.00	.0	5.0	1.1120	1.1120	10
	2	WEST	-.20	.00	.0	5.0	.5299	.5299	16
	3	WEST	-.30	.00	.0	5.0	.4570	.4570	17
	4	WEST	-.40	.00	.0	5.0	.5343	.5343	15
	5	WEST	-.50	.00	.0	5.0	.6306	.6306	14
	6	WEST	-.60	.00	.0	5.0	.7470	.7470	13
	7	WEST	-.70	.00	.0	5.0	.8839	.8839	12
	8	WEST	-.80	.00	.0	5.0	1.0409	1.0409	11
	9	WEST	-.90	.00	.0	5.0	1.2169	1.2169	9
	10	WEST	-1.00	.00	.0	5.0	1.4099	1.4099	8
	11	WEST	-1.20	.00	.0	5.0	1.6929	1.6929	7
	12	WEST	-1.50	.00	.0	5.0	2.1095	2.1095	6
	13	WEST	-2.00	.00	.0	5.0	2.7207	2.7207	5
	14	WEST	-2.50	.00	.0	5.0	3.1799	3.1799	4
	15	WEST	-3.00	.00	.0	5.0	3.4832	3.4832	3
	16	WEST	-4.00	.00	.0	5.0	3.6635	3.6635	1
	17	WEST	-5.00	.00	.0	5.0	3.5893	3.5893	2

HOUR	THETA (DEG)	SPEED (M/S)	MIXING HEIGHT(M)	TEMP (K)	STABILITY CLASS
24	90.00	1.50	300.00	298.00	4

FINAL HT (M) 115.06

DIST FIN HT (KM) .246

0	RECEPTOR NO.	NAME	EAST COORD	NORTH COORD	RECEPTOR HT ABV GRD (M)	RECEPTOR GRD-LVL ELEV (USER HT UNITS)	TOTAL FROM SIGNIF POINT SOURCES	TOTAL FROM ALL SOURCES	CONCENTRATION RANK
	1	WEST	-.10	.00	.0	5.0	1.5115	1.5115	13
	2	WEST	-.20	.00	.0	5.0	.7793	.7793	16
	3	WEST	-.30	.00	.0	5.0	.7275	.7275	17
	4	WEST	-.40	.00	.0	5.0	.9374	.9374	15
	5	WEST	-.50	.00	.0	5.0	1.2060	1.2060	14
	6	WEST	-.60	.00	.0	5.0	1.5324	1.5324	12
	7	WEST	-.70	.00	.0	5.0	1.9108	1.9108	11
	8	WEST	-.80	.00	.0	5.0	2.3307	2.3307	10
	9	WEST	-.90	.00	.0	5.0	2.7789	2.7789	9
	10	WEST	-1.00	.00	.0	5.0	3.2405	3.2405	8
	11	WEST	-1.20	.00	.0	5.0	3.8385	3.8385	7
	12	WEST	-1.50	.00	.0	5.0	4.5635	4.5635	5
	13	WEST	-2.00	.00	.0	5.0	5.2970	5.2970	3
	14	WEST	-2.50	.00	.0	5.0	5.5637	5.5637	1
	15	WEST	-3.00	.00	.0	5.0	5.5380	5.5380	2
	16	WEST	-4.00	.00	.0	5.0	5.0448	5.0448	4
	17	WEST	-5.00	.00	.0	5.0	4.4502	4.4502	6

HOUR	THETA (DEG)	SPEED (M/S)	MIXING HEIGHT(M)	TEMP (K)	STABILITY CLASS
25	90.00	2.00	300.00	298.00	4

FINAL HT (M) 87.55

DIST FIN HT (KM) .246

0	RECEPTOR NO.	NAME	EAST COORD	NORTH COORD	RECEPTOR HT ABV GRD (M)	RECEPTOR GRD-LVL ELEV (USER HT UNITS)	TOTAL FROM SIGNIF POINT SOURCES	TOTAL FROM ALL SOURCES	CONCENTRATION RANK
	1	WEST	-.10	.00	.0	5.0	2.1412	2.1412	14
	2	WEST	-.20	.00	.0	5.0	1.2228	1.2228	17
	3	WEST	-.30	.00	.0	5.0	1.2677	1.2677	16
	4	WEST	-.40	.00	.0	5.0	1.8251	1.8251	15
	5	WEST	-.50	.00	.0	5.0	2.5326	2.5326	13
	6	WEST	-.60	.00	.0	5.0	3.3543	3.3543	12
	7	WEST	-.70	.00	.0	5.0	4.2373	4.2373	11
	8	WEST	-.80	.00	.0	5.0	5.1252	5.1252	9
	9	WEST	-.90	.00	.0	5.0	5.9685	5.9685	7
	10	WEST	-1.00	.00	.0	5.0	6.7308	6.7308	6
	11	WEST	-1.20	.00	.0	5.0	7.4709	7.4709	4
	12	WEST	-1.50	.00	.0	5.0	8.0418	8.0418	2
	13	WEST	-2.00	.00	.0	5.0	8.0726	8.0726	1
	14	WEST	-2.50	.00	.0	5.0	7.5658	7.5658	3
	15	WEST	-3.00	.00	.0	5.0	6.8957	6.8957	5
	16	WEST	-4.00	.00	.0	5.0	5.5899	5.5899	8
	17	WEST	-5.00	.00	.0	5.0	4.5671	4.5671	10

HOUR	THETA (DEG)	SPEED (M/S)	MIXING HEIGHT(M)	TEMP (K)	STABILITY CLASS
26	90.00	2.50	300.00	298.00	4

FINAL HT (M) 71.04

DIST FIN HT (KM) .246

0	RECEPTOR NO.	NAME	EAST COORD	NORTH COORD	RECEPTOR HT ABV GRD (M)	RECEPTOR GRD-LVL ELEV (USER HT UNITS)	TOTAL FROM SIGNIF POINT SOURCES	TOTAL FROM ALL SOURCES	CONCENTRATION RANK
	1	WEST	-.10	.00	.0	5.0	2.9882	2.9882	15
	2	WEST	-.20	.00	.0	5.0	1.8774	1.8774	17
	3	WEST	-.30	.00	.0	5.0	2.1326	2.1326	16
	4	WEST	-.40	.00	.0	5.0	3.3046	3.3046	14
	5	WEST	-.50	.00	.0	5.0	4.7066	4.7066	12
	6	WEST	-.60	.00	.0	5.0	6.1841	6.1841	10
	7	WEST	-.70	.00	.0	5.0	7.5882	7.5882	8
	8	WEST	-.80	.00	.0	5.0	8.8130	8.8130	6
	9	WEST	-.90	.00	.0	5.0	9.8039	9.8039	4
	10	WEST	-1.00	.00	.0	5.0	10.5487	10.5487	3
	11	WEST	-1.20	.00	.0	5.0	10.9006	10.9006	1
	12	WEST	-1.50	.00	.0	5.0	10.7190	10.7190	2
	13	WEST	-2.00	.00	.0	5.0	9.6257	9.6257	5
	14	WEST	-2.50	.00	.0	5.0	8.3537	8.3537	7
	15	WEST	-3.00	.00	.0	5.0	7.2064	7.2064	9
	16	WEST	-4.00	.00	.0	5.0	5.4576	5.4576	11
	17	WEST	-5.00	.00	.0	5.0	4.2746	4.2746	13

HOUR	THETA (DEG)	SPEED (M/S)	MIXING HEIGHT(M)	TEMP (K)	STABILITY CLASS
27	90.00	3.00	300.00	298.00	4

FINAL HT (M) 60.03

DIST FIN HT (KM) .246

0	RECEPTOR NO.	NAME	EAST COORD	NORTH COORD	RECEPTOR HT ABV GRD (M)	RECEPTOR GRD-LVL ELEV (USER HT UNITS)	TOTAL FROM SIGNIF POINT SOURCES	TOTAL FROM ALL SOURCES	CONCENTRATION RANK
	1	WEST	-.10	.00	.0	5.0	4.1499	4.1499	14
	2	WEST	-.20	.00	.0	5.0	2.8294	2.8294	17
	3	WEST	-.30	.00	.0	5.0	3.4366	3.4366	16
	4	WEST	-.40	.00	.0	5.0	5.4910	5.4910	12
	5	WEST	-.50	.00	.0	5.0	7.7115	7.7115	10
	6	WEST	-.60	.00	.0	5.0	9.7590	9.7590	8
	7	WEST	-.70	.00	.0	5.0	11.4219	11.4219	6
	8	WEST	-.80	.00	.0	5.0	12.6276	12.6276	4
	9	WEST	-.90	.00	.0	5.0	13.3971	13.3971	3
	10	WEST	-1.00	.00	.0	5.0	13.7968	13.7968	1
	11	WEST	-1.20	.00	.0	5.0	13.4195	13.4195	2
	12	WEST	-1.50	.00	.0	5.0	12.3053	12.3053	5
	13	WEST	-2.00	.00	.0	5.0	10.2128	10.2128	7
	14	WEST	-2.50	.00	.0	5.0	8.4237	8.4237	9
	15	WEST	-3.00	.00	.0	5.0	7.0177	7.0177	11
	16	WEST	-4.00	.00	.0	5.0	5.0978	5.0978	13
	17	WEST	-5.00	.00	.0	5.0	3.8936	3.8936	15

HOUR	THETA (DEG)	SPEED (M/S)	MIXING HEIGHT(M)	TEMP (K)	STABILITY CLASS
28	90.00	4.00	300.00	298.00	4

FINAL HT (M) 46.27

DIST FIN HT (KM) .246

0	RECEPTOR NO.	NAME	EAST COORD	NORTH COORD	RECEPTOR HT ABV GRD (M)	RECEPTOR GRD-LVL ELEV (USER HT UNITS)	TOTAL FROM SIGNIF POINT SOURCES	TOTAL FROM ALL SOURCES	CONCENTRATION RANK
	1	WEST	-.10	.00	.0	5.0	7.8323	7.8323	11
	2	WEST	-.20	.00	.0	5.0	5.9578	5.9578	15
	3	WEST	-.30	.00	.0	5.0	7.6329	7.6329	13
	4	WEST	-.40	.00	.0	5.0	11.7651	11.7651	9
	5	WEST	-.50	.00	.0	5.0	15.1128	15.1128	7
	6	WEST	-.60	.00	.0	5.0	17.2682	17.2682	5
	7	WEST	-.70	.00	.0	5.0	18.3271	18.3271	2
	8	WEST	-.80	.00	.0	5.0	18.5639	18.5639	1
	9	WEST	-.90	.00	.0	5.0	18.2530	18.2530	3
	10	WEST	-1.00	.00	.0	5.0	17.6092	17.6092	4
	11	WEST	-1.20	.00	.0	5.0	15.7461	15.7461	6
	12	WEST	-1.50	.00	.0	5.0	13.1882	13.1882	8
	13	WEST	-2.00	.00	.0	5.0	9.9477	9.9477	10
	14	WEST	-2.50	.00	.0	5.0	7.7380	7.7380	12
	15	WEST	-3.00	.00	.0	5.0	6.2000	6.2000	14
	16	WEST	-4.00	.00	.0	5.0	4.3040	4.3040	16
	17	WEST	-5.00	.00	.0	5.0	3.2005	3.2005	17

HOUR	THETA (DEG)	SPEED (M/S)	MIXING HEIGHT(M)	TEMP (K)	STABILITY CLASS
29	90.00	5.00	300.00	298.00	4

FINAL HT (M) 37.98

DIST FIN HT (KM) .246

0

RECEPTOR NO.	NAME	EAST COORD	NORTH COORD	RECEPTOR HT ABV GRD (M)	RECEPTOR GRD-LVL ELEV (USER HT UNITS)	TOTAL FROM SIGNIF POINT SOURCES	TOTAL FROM ALL SOURCES	CONCENTRATION RANK
1	WEST	-.10	.00	.0	5.0	14.1602	14.1602	9
2	WEST	-.20	.00	.0	5.0	11.1378	11.1378	12
3	WEST	-.30	.00	.0	5.0	13.8417	13.8417	10
4	WEST	-.40	.00	.0	5.0	19.2880	19.2880	6
5	WEST	-.50	.00	.0	5.0	22.2468	22.2468	3
6	WEST	-.60	.00	.0	5.0	23.1392	23.1392	1
7	WEST	-.70	.00	.0	5.0	22.7307	22.7307	2
8	WEST	-.80	.00	.0	5.0	21.6279	21.6279	4
9	WEST	-.90	.00	.0	5.0	20.2160	20.2160	5
10	WEST	-1.00	.00	.0	5.0	18.7155	18.7155	7
11	WEST	-1.20	.00	.0	5.0	15.9122	15.9122	8
12	WEST	-1.50	.00	.0	5.0	12.6571	12.6571	11
13	WEST	-2.00	.00	.0	5.0	9.0652	9.0652	13
14	WEST	-2.50	.00	.0	5.0	6.8394	6.8394	14
15	WEST	-3.00	.00	.0	5.0	5.3723	5.3723	15
16	WEST	-4.00	.00	.0	5.0	3.6458	3.6458	16
17	WEST	-5.00	.00	.0	5.0	2.6755	2.6755	17

HOUR	THETA (DEG)	SPEED (M/S)	MIXING HEIGHT(M)	TEMP (K)	STABILITY CLASS
30	90.00	7.00	300.00	298.00	4

FINAL HT (M) 26.85

DIST FIN HT (KM) .246

0

RECEPTOR NO.	NAME	EAST COORD	NORTH COORD	RECEPTOR HT ABV GRD (M)	RECEPTOR GRD-LVL ELEV (USER HT UNITS)	TOTAL FROM SIGNIF POINT SOURCES	TOTAL FROM ALL SOURCES	CONCENTRATION RANK
1	WEST	-.10	.00	.0	5.0	70.9504	70.9504	1
2	WEST	-.20	.00	.0	5.0	37.5621	37.5621	2
3	WEST	-.30	.00	.0	5.0	35.2079	35.2079	4
4	WEST	-.40	.00	.0	5.0	36.9432	36.9432	3
5	WEST	-.50	.00	.0	5.0	34.5345	34.5345	5
6	WEST	-.60	.00	.0	5.0	30.8347	30.8347	6
7	WEST	-.70	.00	.0	5.0	27.0729	27.0729	7
8	WEST	-.80	.00	.0	5.0	23.6760	23.6760	8
9	WEST	-.90	.00	.0	5.0	20.7434	20.7434	9
10	WEST	-1.00	.00	.0	5.0	18.2547	18.2547	10
11	WEST	-1.20	.00	.0	5.0	14.6204	14.6204	11
12	WEST	-1.50	.00	.0	5.0	10.9642	10.9642	12
13	WEST	-2.00	.00	.0	5.0	7.4169	7.4169	13
14	WEST	-2.50	.00	.0	5.0	5.4152	5.4152	14
15	WEST	-3.00	.00	.0	5.0	4.1651	4.1651	15
16	WEST	-4.00	.00	.0	5.0	2.7604	2.7604	16
17	WEST	-5.00	.00	.0	5.0	1.9984	1.9984	17

HOUR	THETA (DEG)	SPEED (M/S)	MIXING HEIGHT(M)	TEMP (K)	STABILITY CLASS
31	90.00	8.00	300.00	298.00	4

FINAL HT (M) 23.37

DIST FIN HT (KM) .246

0	RECEPTOR NO.	NAME	EAST COORD	NORTH COORD	RECEPTOR HT ABV GRD (M)	RECEPTOR GRD-LVL ELEV (USER HT UNITS)	TOTAL FROM SIGNIF POINT SOURCES	TOTAL FROM ALL SOURCES	CONCENTRATION RANK
	1	WEST	-.10	.00	.0	5.0	118.6656	118.6656	1
	2	WEST	-.20	.00	.0	5.0	54.2268	54.2268	2
	3	WEST	-.30	.00	.0	5.0	45.1387	45.1387	3
	4	WEST	-.40	.00	.0	5.0	42.6326	42.6326	4
	5	WEST	-.50	.00	.0	5.0	37.2275	37.2275	5
	6	WEST	-.60	.00	.0	5.0	31.7543	31.7543	6
	7	WEST	-.70	.00	.0	5.0	27.0042	27.0042	7
	8	WEST	-.80	.00	.0	5.0	23.0757	23.0757	8
	9	WEST	-.90	.00	.0	5.0	19.8706	19.8706	9
	10	WEST	-1.00	.00	.0	5.0	17.2558	17.2558	10
	11	WEST	-1.20	.00	.0	5.0	13.6093	13.6093	11
	12	WEST	-1.50	.00	.0	5.0	10.0550	10.0550	12
	13	WEST	-2.00	.00	.0	5.0	6.7060	6.7060	13
	14	WEST	-2.50	.00	.0	5.0	4.8570	4.8570	14
	15	WEST	-3.00	.00	.0	5.0	3.7168	3.7168	15
	16	WEST	-4.00	.00	.0	5.0	2.4492	2.4492	16
	17	WEST	-5.00	.00	.0	5.0	1.7673	1.7673	17

HOUR	THETA (DEG)	SPEED (M/S)	MIXING HEIGHT(M)	TEMP (K)	STABILITY CLASS
32	90.00	9.00	300.00	298.00	4

FINAL HT (M) 20.66

DIST FIN HT (KM) .246

0	RECEPTOR NO.	NAME	EAST COORD	NORTH COORD	RECEPTOR HT ABV GRD (M)	RECEPTOR GRD-LVL ELEV (USER HT UNITS)	TOTAL FROM SIGNIF POINT SOURCES	TOTAL FROM ALL SOURCES	CONCENTRATION RANK
	1	WEST	-.10	.00	.0	5.0	173.2193	173.2193	1
	2	WEST	-.20	.00	.0	5.0	70.4434	70.4434	2
	3	WEST	-.30	.00	.0	5.0	53.1346	53.1346	3
	4	WEST	-.40	.00	.0	5.0	46.1842	46.1842	4
	5	WEST	-.50	.00	.0	5.0	38.3180	38.3180	5
	6	WEST	-.60	.00	.0	5.0	31.6134	31.6134	6
	7	WEST	-.70	.00	.0	5.0	26.2771	26.2771	7
	8	WEST	-.80	.00	.0	5.0	22.0902	22.0902	8
	9	WEST	-.90	.00	.0	5.0	18.7928	18.7928	9
	10	WEST	-1.00	.00	.0	5.0	16.1695	16.1695	10
	11	WEST	-1.20	.00	.0	5.0	12.6176	12.6176	11
	12	WEST	-1.50	.00	.0	5.0	9.2273	9.2273	12
	13	WEST	-2.00	.00	.0	5.0	6.0946	6.0946	13
	14	WEST	-2.50	.00	.0	5.0	4.3901	4.3901	14
	15	WEST	-3.00	.00	.0	5.0	3.3479	3.3479	15
	16	WEST	-4.00	.00	.0	5.0	2.1976	2.1976	16
	17	WEST	-5.00	.00	.0	5.0	1.5822	1.5822	17

HOUR	THETA (DEG)	SPEED (M/S)	MIXING HEIGHT(M)	TEMP (K)	STABILITY CLASS
33	90.00	10.00	300.00	298.00	4

FINAL HT (M) 18.49

DIST FIN HT (KM) .246

0	RECEPTOR NO.	NAME	EAST COORD	NORTH COORD	RECEPTOR HT ABV GRD (M)	RECEPTOR GRD-LVL ELEV (USER HT UNITS)	TOTAL FROM SIGNIF POINT SOURCES	TOTAL FROM ALL SOURCES	CONCENTRATION RANK
	1	WEST	-.10	.00	.0	5.0	228.3319	228.3319	1
	2	WEST	-.20	.00	.0	5.0	84.7679	84.7679	2
	3	WEST	-.30	.00	.0	5.0	59.0082	59.0082	3
	4	WEST	-.40	.00	.0	5.0	48.0474	48.0474	4
	5	WEST	-.50	.00	.0	5.0	38.3481	38.3481	5
	6	WEST	-.60	.00	.0	5.0	30.8653	30.8653	6
	7	WEST	-.70	.00	.0	5.0	25.2294	25.2294	7
	8	WEST	-.80	.00	.0	5.0	20.9591	20.9591	8
	9	WEST	-.90	.00	.0	5.0	17.6752	17.6752	9
	10	WEST	-1.00	.00	.0	5.0	15.1073	15.1073	10
	11	WEST	-1.20	.00	.0	5.0	11.6992	11.6992	11
	12	WEST	-1.50	.00	.0	5.0	8.4936	8.4936	12
	13	WEST	-2.00	.00	.0	5.0	5.5716	5.5716	13
	14	WEST	-2.50	.00	.0	5.0	3.9978	3.9978	14
	15	WEST	-3.00	.00	.0	5.0	3.0413	3.0413	15
	16	WEST	-4.00	.00	.0	5.0	1.9909	1.9909	16
	17	WEST	-5.00	.00	.0	5.0	1.4312	1.4312	17

HOUR	THETA (DEG)	SPEED (M/S)	MIXING HEIGHT(M)	TEMP (K)	STABILITY CLASS
34	90.00	12.00	300.00	298.00	4

FINAL HT (M) 15.24

DIST FIN HT (KM) .246

0	RECEPTOR NO.	NAME	EAST COORD	NORTH COORD	RECEPTOR HT ABV GRD (M)	RECEPTOR GRD-LVL ELEV (USER HT UNITS)	TOTAL FROM SIGNIF POINT SOURCES	TOTAL FROM ALL SOURCES	CONCENTRATION RANK
	1	WEST	-.10	.00	.0	5.0	322.0502	322.0502	1
	2	WEST	-.20	.00	.0	5.0	105.4947	105.4947	2
	3	WEST	-.30	.00	.0	5.0	65.3088	65.3088	3
	4	WEST	-.40	.00	.0	5.0	48.4852	48.4852	4
	5	WEST	-.50	.00	.0	5.0	36.7039	36.7039	5
	6	WEST	-.60	.00	.0	5.0	28.5813	28.5813	6
	7	WEST	-.70	.00	.0	5.0	22.8520	22.8520	7
	8	WEST	-.80	.00	.0	5.0	18.6913	18.6913	8
	9	WEST	-.90	.00	.0	5.0	15.5844	15.5844	9
	10	WEST	-1.00	.00	.0	5.0	13.2062	13.2062	10
	11	WEST	-1.20	.00	.0	5.0	10.1271	10.1271	11
	12	WEST	-1.50	.00	.0	5.0	7.2837	7.2837	12
	13	WEST	-2.00	.00	.0	5.0	4.7361	4.7361	13
	14	WEST	-2.50	.00	.0	5.0	3.3816	3.3816	14
	15	WEST	-3.00	.00	.0	5.0	2.5645	2.5645	15
	16	WEST	-4.00	.00	.0	5.0	1.6730	1.6730	16
	17	WEST	-5.00	.00	.0	5.0	1.2003	1.2003	17

HOUR	THETA (DEG)	SPEED (M/S)	MIXING HEIGHT(M)	TEMP (K)	STABILITY CLASS
35	90.00	15.00	300.00	298.00	4

FINAL HT (M) 11.99

DIST FIN HT (KM) .246

0	RECEPTOR NO.	NAME	EAST COORD	NORTH COORD	RECEPTOR HT ABV GRD (M)	RECEPTOR GRD-LVL ELEV (USER HT UNITS)	TOTAL FROM SIGNIF POINT SOURCES	TOTAL FROM ALL SOURCES	CONCENTRATION RANK
	1	WEST	-.10	.00	.0	5.0	399.9852	399.9852	1
	2	WEST	-.20	.00	.0	5.0	118.7274	118.7274	2
	3	WEST	-.30	.00	.0	5.0	66.1728	66.1728	3
	4	WEST	-.40	.00	.0	5.0	45.3198	45.3198	4
	5	WEST	-.50	.00	.0	5.0	32.8161	32.8161	5
	6	WEST	-.60	.00	.0	5.0	24.8681	24.8681	6
	7	WEST	-.70	.00	.0	5.0	19.5296	19.5296	7
	8	WEST	-.80	.00	.0	5.0	15.7754	15.7754	8
	9	WEST	-.90	.00	.0	5.0	13.0340	13.0340	9
	10	WEST	-1.00	.00	.0	5.0	10.9696	10.9696	10
	11	WEST	-1.20	.00	.0	5.0	8.3468	8.3468	11
	12	WEST	-1.50	.00	.0	5.0	5.9590	5.9590	12
	13	WEST	-2.00	.00	.0	5.0	3.8481	3.8481	13
	14	WEST	-2.50	.00	.0	5.0	2.7370	2.7370	14
	15	WEST	-3.00	.00	.0	5.0	2.0706	2.0706	15
	16	WEST	-4.00	.00	.0	5.0	1.3472	1.3472	16
	17	WEST	-5.00	.00	.0	5.0	.9650	.9650	17

HOUR	THETA (DEG)	SPEED (M/S)	MIXING HEIGHT(M)	TEMP (K)	STABILITY CLASS
36	90.00	20.00	300.00	298.00	4

FINAL HT (M) 8.75

DIST FIN HT (KM) .246

0	RECEPTOR NO.	NAME	EAST COORD	NORTH COORD	RECEPTOR HT ABV GRD (M)	RECEPTOR GRD-LVL ELEV (USER HT UNITS)	TOTAL FROM SIGNIF POINT SOURCES	TOTAL FROM ALL SOURCES	CONCENTRATION RANK
	1	WEST	-.10	.00	.0	5.0	411.5412	411.5412	1
	2	WEST	-.20	.00	.0	5.0	115.5448	115.5448	2
	3	WEST	-.30	.00	.0	5.0	59.3239	59.3239	3
	4	WEST	-.40	.00	.0	5.0	38.1401	38.1401	4
	5	WEST	-.50	.00	.0	5.0	26.7000	26.7000	5
	6	WEST	-.60	.00	.0	5.0	19.8264	19.8264	6
	7	WEST	-.70	.00	.0	5.0	15.3652	15.3652	7
	8	WEST	-.80	.00	.0	5.0	12.2982	12.2982	8
	9	WEST	-.90	.00	.0	5.0	10.0938	10.0938	9
	10	WEST	-1.00	.00	.0	5.0	8.4529	8.4529	10
	11	WEST	-1.20	.00	.0	5.0	6.3956	6.3956	11
	12	WEST	-1.50	.00	.0	5.0	4.5417	4.5417	12
	13	WEST	-2.00	.00	.0	5.0	2.9183	2.9183	13
	14	WEST	-2.50	.00	.0	5.0	2.0699	2.0699	14
	15	WEST	-3.00	.00	.0	5.0	1.5632	1.5632	15
	16	WEST	-4.00	.00	.0	5.0	1.0151	1.0151	16
	17	WEST	-5.00	.00	.0	5.0	.7263	.7263	17

HOUR	THETA (DEG)	SPEED (M/S)	MIXING HEIGHT(M)	TEMP (K)	STABILITY CLASS
37	90.00	1.00	300.00	298.00	5

FINAL HT (M) 75.73

DIST FIN HT (KM) .081

0	RECEPTOR NO.	NAME	EAST COORD	NORTH COORD	RECEPTOR HT ABV GRD (M)	RECEPTOR GRD-LVL ELEV (USER HT UNITS)	TOTAL FROM SIGNIF POINT SOURCES	TOTAL FROM ALL SOURCES	CONCENTRATION RANK
	1	WEST	-.10	.00	.0	5.0	2.0628	2.0628	17
	2	WEST	-.20	.00	.0	5.0	2.5745	2.5745	16
	3	WEST	-.30	.00	.0	5.0	3.3485	3.3485	15
	4	WEST	-.40	.00	.0	5.0	4.2521	4.2521	14
	5	WEST	-.50	.00	.0	5.0	5.3333	5.3333	13
	6	WEST	-.60	.00	.0	5.0	6.5638	6.5638	12
	7	WEST	-.70	.00	.0	5.0	7.9021	7.9021	11
	8	WEST	-.80	.00	.0	5.0	9.3003	9.3003	10
	9	WEST	-.90	.00	.0	5.0	10.7095	10.7095	9
	10	WEST	-1.00	.00	.0	5.0	12.0855	12.0855	8
	11	WEST	-1.20	..00	.0	5.0	13.8332	13.8332	6
	12	WEST	-1.50	.00	.0	5.0	15.7587	15.7587	4
	13	WEST	-2.00	.00	.0	5.0	17.3550	17.3550	1
	14	WEST	-2.50	.00	.0	5.0	17.2780	17.2780	2
	15	WEST	-3.00	.00	.0	5.0	16.6417	16.6417	3
	16	WEST	-4.00	.00	.0	5.0	14.7872	14.7872	5
	17	WEST	-5.00	.00	.0	5.0	12.8267	12.8267	7

HOUR	THETA (DEG)	SPEED (M/S)	MIXING HEIGHT(M)	TEMP (K)	STABILITY CLASS
38	90.00	1.50	300.00	298.00	5

FINAL HT (M) 71.99

DIST FIN HT (KM) .095

0	RECEPTOR NO.	NAME	EAST COORD	NORTH COORD	RECEPTOR HT ABV GRD (M)	RECEPTOR GRD-LVL ELEV (USER HT UNITS)	TOTAL FROM SIGNIF POINT SOURCES	TOTAL FROM ALL SOURCES	CONCENTRATION RANK
	1	WEST	-.10	.00	.0	5.0	1.9807	1.9807	17
	2	WEST	-.20	.00	.0	5.0	2.5285	2.5285	16
	3	WEST	-.30	.00	.0	5.0	3.3646	3.3646	15
	4	WEST	-.40	.00	.0	5.0	4.3443	4.3443	14
	5	WEST	-.50	.00	.0	5.0	5.5126	5.5126	13
	6	WEST	-.60	.00	.0	5.0	6.8301	6.8301	12
	7	WEST	-.70	.00	.0	5.0	8.2435	8.2435	11
	8	WEST	-.80	.00	.0	5.0	9.6947	9.6947	10
	9	WEST	-.90	.00	.0	5.0	11.1282	11.1282	9
	10	WEST	-1.00	.00	.0	5.0	12.4970	12.4970	7
	11	WEST	-1.20	.00	.0	5.0	14.1552	14.1552	5
	12	WEST	-1.50	.00	.0	5.0	15.8550	15.8550	3
	13	WEST	-2.00	.00	.0	5.0	17.0125	17.0125	1
	14	WEST	-2.50	.00	.0	5.0	16.6130	16.6130	2
	15	WEST	-3.00	.00	.0	5.0	15.7565	15.7565	4
	16	WEST	-4.00	.00	.0	5.0	13.6889	13.6889	6
	17	WEST	-5.00	.00	.0	5.0	11.7126	11.7126	8

HOUR	THETA (DEG)	SPEED (M/S)	MIXING HEIGHT(M)	TEMP (K)	STABILITY CLASS
39	90.00	2.00	300.00	298.00	5

FINAL HT (M) 65.87

DIST FIN HT (KM) .127

0	RECEPTOR NO.	NAME	EAST COORD	NORTH COORD	RECEPTOR HT ABV GRD (M)	RECEPTOR GRD-LVL ELEV (USER HT UNITS)	TOTAL FROM SIGNIF POINT SOURCES	TOTAL FROM ALL SOURCES	CONCENTRATION RANK
	1	WEST	-.10	.00	.0	5.0	2.6883	2.6883	16
	2	WEST	-.20	.00	.0	5.0	2.4698	2.4698	17
	3	WEST	-.30	.00	.0	5.0	3.4303	3.4303	15
	4	WEST	-.40	.00	.0	5.0	4.5591	4.5591	14
	5	WEST	-.50	.00	.0	5.0	5.8897	5.8897	13
	6	WEST	-.60	.00	.0	5.0	7.3565	7.3565	12
	7	WEST	-.70	.00	.0	5.0	8.8815	8.8815	11
	8	WEST	-.80	.00	.0	5.0	10.3890	10.3890	9
	9	WEST	-.90	.00	.0	5.0	11.8155	11.8155	7
	10	WEST	-1.00	.00	.0	5.0	13.1147	13.1147	6
	11	WEST	-1.20	.00	.0	5.0	14.5270	14.5270	4
	12	WEST	-1.50	.00	.0	5.0	15.7398	15.7398	2
	13	WEST	-2.00	.00	.0	5.0	16.1015	16.1015	1
	14	WEST	-2.50	.00	.0	5.0	15.2005	15.2005	3
	15	WEST	-3.00	.00	.0	5.0	14.0429	14.0429	5
	16	WEST	-4.00	.00	.0	5.0	11.7519	11.7519	8
	17	WEST	-5.00	.00	.0	5.0	9.8335	9.8335	10

HOUR	THETA (DEG)	SPEED (M/S)	MIXING HEIGHT(M)	TEMP (K)	STABILITY CLASS
40	90.00	2.50	300.00	298.00	5

FINAL HT (M) 61.50

DIST FIN HT (KM) .158

0	RECEPTOR NO.	NAME	EAST COORD	NORTH COORD	RECEPTOR HT ABV GRD (M)	RECEPTOR GRD-LVL ELEV (USER HT UNITS)	TOTAL FROM SIGNIF POINT SOURCES	TOTAL FROM ALL SOURCES	CONCENTRATION RANK
	1	WEST	-.10	.00	.0	5.0	3.7720	3.7720	15
	2	WEST	-.20	.00	.0	5.0	2.4448	2.4448	17
	3	WEST	-.30	.00	.0	5.0	3.5160	3.5160	16
	4	WEST	-.40	.00	.0	5.0	4.7724	4.7724	14
	5	WEST	-.50	.00	.0	5.0	6.2318	6.2318	13
	6	WEST	-.60	.00	.0	5.0	7.8019	7.8019	12
	7	WEST	-.70	.00	.0	5.0	9.3839	9.3839	10
	8	WEST	-.80	.00	.0	5.0	10.8917	10.8917	8
	9	WEST	-.90	.00	.0	5.0	12.2614	12.2614	7
	10	WEST	-1.00	.00	.0	5.0	13.4536	13.4536	5
	11	WEST	-1.20	.00	.0	5.0	14.6056	14.6056	3
	12	WEST	-1.50	.00	.0	5.0	15.3895	15.3895	1
	13	WEST	-2.00	.00	.0	5.0	15.1621	15.1621	2
	14	WEST	-2.50	.00	.0	5.0	13.9542	13.9542	4
	15	WEST	-3.00	.00	.0	5.0	12.6457	12.6457	6
	16	WEST	-4.00	.00	.0	5.0	10.3031	10.3031	9
	17	WEST	-5.00	.00	.0	5.0	8.4877	8.4877	11

HOUR	THETA (DEG)	SPEED (M/S)	MIXING HEIGHT(M)	TEMP (K)	STABILITY CLASS
41	90.00	3.00	300.00	298.00	5

FINAL HT (M) 58.17

DIST FIN HT (KM) .190

0	RECEPTOR NO.	NAME	EAST COORD	NORTH COORD	RECEPTOR HT ABV GRD (M)	RECEPTOR GRD-LVL ELEV (USER HT UNITS)	TOTAL FROM SIGNIF POINT SOURCES	TOTAL FROM ALL SOURCES	CONCENTRATION RANK
	1	WEST	-.10	.00	.0	5.0	5.1684	5.1684	14
	2	WEST	-.20	.00	.0	5.0	2.4383	2.4383	17
	3	WEST	-.30	.00	.0	5.0	3.6098	3.6098	16
	4	WEST	-.40	.00	.0	5.0	4.9770	4.9770	15
	5	WEST	-.50	.00	.0	5.0	6.5389	6.5389	13
	6	WEST	-.60	.00	.0	5.0	8.1781	8.1781	11
	7	WEST	-.70	.00	.0	5.0	9.7799	9.7799	9
	8	WEST	-.80	.00	.0	5.0	11.2539	11.2539	8
	9	WEST	-.90	.00	.0	5.0	12.5412	12.5412	6
	10	WEST	-1.00	.00	.0	5.0	13.6133	13.6133	4
	11	WEST	-1.20	.00	.0	5.0	14.5174	14.5174	2
	12	WEST	-1.50	.00	.0	5.0	14.9394	14.9394	1
	13	WEST	-2.00	.00	.0	5.0	14.2763	14.2763	3
	14	WEST	-2.50	.00	.0	5.0	12.8790	12.8790	5
	15	WEST	-3.00	.00	.0	5.0	11.4994	11.4994	7
	16	WEST	-4.00	.00	.0	5.0	9.1808	9.1808	10
	17	WEST	-5.00	.00	.0	5.0	7.4753	7.4753	12

HOUR	THETA (DEG)	SPEED (M/S)	MIXING HEIGHT(M)	TEMP (K)	STABILITY CLASS
42	90.00	4.00	300.00	298.00	5

FINAL HT (M) 53.31

DIST FIN HT (KM) .253

0	RECEPTOR NO.	NAME	EAST COORD	NORTH COORD	RECEPTOR HT ABV GRD (M)	RECEPTOR GRD-LVL ELEV (USER HT UNITS)	TOTAL FROM SIGNIF POINT SOURCES	TOTAL FROM ALL SOURCES	CONCENTRATION RANK
	1	WEST	-.10	.00	.0	5.0	9.2973	9.2973	10
	2	WEST	-.20	.00	.0	5.0	4.1064	4.1064	16
	3	WEST	-.30	.00	.0	5.0	3.8032	3.8032	17
	4	WEST	-.40	.00	.0	5.0	5.3522	5.3522	15
	5	WEST	-.50	.00	.0	5.0	7.0595	7.0595	13
	6	WEST	-.60	.00	.0	5.0	8.7651	8.7651	11
	7	WEST	-.70	.00	.0	5.0	10.3366	10.3366	8
	8	WEST	-.80	.00	.0	5.0	11.6889	11.6889	6
	9	WEST	-.90	.00	.0	5.0	12.7831	12.7831	4
	10	WEST	-1.00	.00	.0	5.0	13.6152	13.6152	3
	11	WEST	-1.20	.00	.0	5.0	14.0913	14.0913	1
	12	WEST	-1.50	.00	.0	5.0	13.9622	13.9622	2
	13	WEST	-2.00	.00	.0	5.0	12.7323	12.7323	5
	14	WEST	-2.50	.00	.0	5.0	11.1498	11.1498	7
	15	WEST	-3.00	.00	.0	5.0	9.7421	9.7421	9
	16	WEST	-4.00	.00	.0	5.0	7.5546	7.5546	12
	17	WEST	-5.00	.00	.0	5.0	6.0505	6.0505	14

HOUR	THETA (DEG)	SPEED (M/S)	MIXING HEIGHT(M)	TEMP (K)	STABILITY CLASS
43	90.00	5.00	300.00	298.00	5

FINAL HT (M) 49.85

DIST FIN HT (KM) .317

0	RECEPTOR NO.	NAME	EAST COORD	NORTH COORD	RECEPTOR HT ABV GRD (M)	RECEPTOR GRD-LVL ELEV (USER HT UNITS)	TOTAL FROM SIGNIF POINT SOURCES	TOTAL FROM ALL SOURCES	CONCENTRATION RANK
	1	WEST	-.10	.00	.0	5.0	15.9733	15.9733	1
	2	WEST	-.20	.00	.0	5.0	7.2401	7.2401	13
	3	WEST	-.30	.00	.0	5.0	4.5676	4.5676	17
	4	WEST	-.40	.00	.0	5.0	5.6817	5.6817	15
	5	WEST	-.50	.00	.0	5.0	7.4761	7.4761	12
	6	WEST	-.60	.00	.0	5.0	9.1850	9.1850	10
	7	WEST	-.70	.00	.0	5.0	10.6737	10.6737	8
	8	WEST	-.80	.00	.0	5.0	11.8747	11.8747	6
	9	WEST	-.90	.00	.0	5.0	12.7738	12.7738	5
	10	WEST	-1.00	.00	.0	5.0	13.3909	13.3909	3
	11	WEST	-1.20	.00	.0	5.0	13.5303	13.5303	2
	12	WEST	-1.50	.00	.0	5.0	13.0214	13.0214	4
	13	WEST	-2.00	.00	.0	5.0	11.4707	11.4707	7
	14	WEST	-2.50	.00	.0	5.0	9.8334	9.8334	9
	15	WEST	-3.00	.00	.0	5.0	8.4619	8.4619	11
	16	WEST	-4.00	.00	.0	5.0	6.4308	6.4308	14
	17	WEST	-5.00	.00	.0	5.0	5.0926	5.0926	16

HOUR	THETA (DEG)	SPEED (M/S)	MIXING HEIGHT(M)	TEMP (K)	STABILITY CLASS
44	90.00	1.00	300.00	298.00	6

FINAL HT (M) 63.69

DIST FIN HT (KM) .061

0	RECEPTOR NO.	NAME	EAST COORD	NORTH COORD	RECEPTOR HT ABV GRD (M)	RECEPTOR GRD-LVL ELEV (USER HT UNITS)	TOTAL FROM SIGNIF POINT SOURCES	TOTAL FROM ALL SOURCES	CONCENTRATION RANK
	1	WEST	-.10	.00	.0	5.0	2.8626	2.8626	17
	2	WEST	-.20	.00	.0	5.0	3.2983	3.2983	16
	3	WEST	-.30	.00	.0	5.0	3.8770	3.8770	15
	4	WEST	-.40	.00	.0	5.0	4.6148	4.6148	14
	5	WEST	-.50	.00	.0	5.0	5.5165	5.5165	13
	6	WEST	-.60	.00	.0	5.0	6.5800	6.5800	12
	7	WEST	-.70	.00	.0	5.0	7.7942	7.7942	11
	8	WEST	-.80	.00	.0	5.0	8.8526	8.8526	10
	9	WEST	-.90	.00	.0	5.0	9.9493	9.9493	9
	10	WEST	-1.00	.00	.0	5.0	11.0669	11.0669	8
	11	WEST	-1.20	.00	.0	5.0	12.9745	12.9745	7
	12	WEST	-1.50	.00	.0	5.0	15.5813	15.5813	6
	13	WEST	-2.00	.00	.0	5.0	18.9527	18.9527	4
	14	WEST	-2.50	.00	.0	5.0	20.2620	20.2620	2
	15	WEST	-3.00	.00	.0	5.0	20.8124	20.8124	1
	16	WEST	-4.00	.00	.0	5.0	19.9223	19.9223	3
	17	WEST	-5.00	.00	.0	5.0	18.6075	18.6075	5

HOUR	THETA (DEG)	SPEED (M/S)	MIXING HEIGHT(M)	TEMP (K)	STABILITY CLASS
45	90.00	1.50	300.00	298.00	6

FINAL HT (M) 63.22

DIST FIN HT (KM) .063

0

RECEPTOR NO.	NAME	EAST COORD	NORTH COORD	RECEPTOR HT ABV GRD (M)	RECEPTOR GRD-LVL ELEV (USER HT UNITS)	TOTAL FROM SIGNIF POINT SOURCES	TOTAL FROM ALL SOURCES	CONCENTRATION RANK
1	WEST	-.10	.00	.0	5.0	2.8431	2.8431	17
2	WEST	-.20	.00	.0	5.0	3.2829	3.2829	16
3	WEST	-.30	.00	.0	5.0	3.8678	3.8678	15
4	WEST	-.40	.00	.0	5.0	4.6143	4.6143	14
5	WEST	-.50	.00	.0	5.0	5.5270	5.5270	13
6	WEST	-.60	.00	.0	5.0	6.6033	6.6033	12
7	WEST	-.70	.00	.0	5.0	7.8315	7.8315	11
8	WEST	-.80	.00	.0	5.0	8.9011	8.9011	10
9	WEST	-.90	.00	.0	5.0	10.0079	10.0079	9
10	WEST	-1.00	.00	.0	5.0	11.1341	11.1341	8
11	WEST	-1.20	.00	.0	5.0	13.0513	13.0513	7
12	WEST	-1.50	.00	.0	5.0	15.6583	15.6583	6
13	WEST	-2.00	.00	.0	5.0	18.9994	18.9994	4
14	WEST	-2.50	.00	.0	5.0	20.2656	20.2656	2
15	WEST	-3.00	.00	.0	5.0	20.7726	20.7726	1
16	WEST	-4.00	.00	.0	5.0	19.8251	19.8251	3
17	WEST	-5.00	.00	.0	5.0	18.4741	18.4741	5

HOUR	THETA (DEG)	SPEED (M/S)	MIXING HEIGHT(M)	TEMP (K)	STABILITY CLASS
46	90.00	2.00	300.00	298.00	6

FINAL HT (M) 57.90

DIST FIN HT (KM) .083

0

RECEPTOR NO.	NAME	EAST COORD	NORTH COORD	RECEPTOR HT ABV GRD (M)	RECEPTOR GRD-LVL ELEV (USER HT UNITS)	TOTAL FROM SIGNIF POINT SOURCES	TOTAL FROM ALL SOURCES	CONCENTRATION RANK
1	WEST	-.10	.00	.0	5.0	2.6255	2.6255	17
2	WEST	-.20	.00	.0	5.0	3.1183	3.1183	16
3	WEST	-.30	.00	.0	5.0	3.7837	3.7837	15
4	WEST	-.40	.00	.0	5.0	4.6422	4.6422	14
5	WEST	-.50	.00	.0	5.0	5.6958	5.6958	13
6	WEST	-.60	.00	.0	5.0	6.9341	6.9341	12
7	WEST	-.70	.00	.0	5.0	8.3331	8.3331	11
8	WEST	-.80	.00	.0	5.0	9.5339	9.5339	10
9	WEST	-.90	.00	.0	5.0	10.7539	10.7539	9
10	WEST	-1.00	.00	.0	5.0	11.9691	11.9691	8
11	WEST	-1.20	.00	.0	5.0	13.9598	13.9598	7
12	WEST	-1.50	.00	.0	5.0	16.4924	16.4924	6
13	WEST	-2.00	.00	.0	5.0	19.3524	19.3524	3
14	WEST	-2.50	.00	.0	5.0	20.0540	20.0540	1
15	WEST	-3.00	.00	.0	5.0	20.0353	20.0353	2
16	WEST	-4.00	.00	.0	5.0	18.4541	18.4541	4
17	WEST	-5.00	.00	.0	5.0	16.7406	16.7406	5

HOUR	THETA (DEG)	SPEED (M/S)	MIXING HEIGHT(M)	TEMP (K)	STABILITY CLASS
47	90.00	2.50	300.00	298.00	6

FINAL HT (M) 54.11

DIST FIN HT (KM) .104

0	RECEPTOR NO.	NAME	EAST COORD	NORTH COORD	RECEPTOR HT ABV GRD (M)	RECEPTOR GRD-LVL ELEV (USER HT UNITS)	TOTAL FROM SIGNIF POINT SOURCES	TOTAL FROM ALL SOURCES	CONCENTRATION RANK
	1	WEST	-.10	.00	.0	5.0	2.6301	2.6301	17
	2	WEST	-.20	.00	.0	5.0	3.0131	3.0131	16
	3	WEST	-.30	.00	.0	5.0	3.7505	3.7505	15
	4	WEST	-.40	.00	.0	5.0	4.7087	4.7087	14
	5	WEST	-.50	.00	.0	5.0	5.8854	5.8854	13
	6	WEST	-.60	.00	.0	5.0	7.2599	7.2599	12
	7	WEST	-.70	.00	.0	5.0	8.7941	8.7941	11
	8	WEST	-.80	.00	.0	5.0	10.0891	10.0891	10
	9	WEST	-.90	.00	.0	5.0	11.3804	11.3804	9
	10	WEST	-1.00	.00	.0	5.0	12.6396	12.6396	8
	11	WEST	-1.20	.00	.0	5.0	14.6250	14.6250	7
	12	WEST	-1.50	.00	.0	5.0	16.9925	16.9925	5
	13	WEST	-2.00	.00	.0	5.0	19.3384	19.3384	2
	14	WEST	-2.50	.00	.0	5.0	19.5616	19.5616	1
	15	WEST	-3.00	.00	.0	5.0	19.1474	19.1474	3
	16	WEST	-4.00	.00	.0	5.0	17.1615	17.1615	4
	17	WEST	-5.00	.00	.0	5.0	15.2596	15.2596	6

HOUR	THETA (DEG)	SPEED (M/S)	MIXING HEIGHT(M)	TEMP (K)	STABILITY CLASS
48	90.00	3.00	300.00	298.00	6

FINAL HT (M) 51.21

DIST FIN HT (KM) .125

0	RECEPTOR NO.	NAME	EAST COORD	NORTH COORD	RECEPTOR HT ABV GRD (M)	RECEPTOR GRD-LVL ELEV (USER HT UNITS)	TOTAL FROM SIGNIF POINT SOURCES	TOTAL FROM ALL SOURCES	CONCENTRATION RANK
	1	WEST	-.10	.00	.0	5.0	3.3152	3.3152	16
	2	WEST	-.20	.00	.0	5.0	2.9417	2.9417	17
	3	WEST	-.30	.00	.0	5.0	3.7449	3.7449	15
	4	WEST	-.40	.00	.0	5.0	4.7939	4.7939	14
	5	WEST	-.50	.00	.0	5.0	6.0797	6.0797	13
	6	WEST	-.60	.00	.0	5.0	7.5700	7.5700	12
	7	WEST	-.70	.00	.0	5.0	9.2118	9.2118	11
	8	WEST	-.80	.00	.0	5.0	10.5731	10.5731	10
	9	WEST	-.90	.00	.0	5.0	11.9053	11.9053	9
	10	WEST	-1.00	.00	.0	5.0	13.1779	13.1779	8
	11	WEST	-1.20	.00	.0	5.0	15.1097	15.1097	6
	12	WEST	-1.50	.00	.0	5.0	17.2699	17.2699	4
	13	WEST	-2.00	.00	.0	5.0	19.1239	19.1239	1
	14	WEST	-2.50	.00	.0	5.0	18.9546	18.9546	2
	15	WEST	-3.00	.00	.0	5.0	18.2450	18.2450	3
	16	WEST	-4.00	.00	.0	5.0	16.0009	16.0009	5
	17	WEST	-5.00	.00	.0	5.0	14.0074	14.0074	7

HOUR	THETA (DEG)	SPEED (M/S)	MIXING HEIGHT(M)	TEMP (K)	STABILITY CLASS
49	90.00	4.00	300.00	298.00	6

FINAL HT (M) 46.99

DIST FIN HT (KM) .167

0	RECEPTOR NO.	NAME	EAST COORD	NORTH COORD	RECEPTOR HT ABV GRD (M)	RECEPTOR GRD-LVL ELEV (USER HT UNITS)	TOTAL FROM SIGNIF POINT SOURCES	TOTAL FROM ALL SOURCES	CONCENTRATION RANK
	1	WEST	-.10	.00	.0	5.0	4.9853	4.9853	15
	2	WEST	-.20	.00	.0	5.0	2.8557	2.8557	17
	3	WEST	-.30	.00	.0	5.0	3.7775	3.7775	16
	4	WEST	-.40	.00	.0	5.0	4.9872	4.9872	14
	5	WEST	-.50	.00	.0	5.0	6.4589	6.4589	13
	6	WEST	-.60	.00	.0	5.0	8.1329	8.1329	12
	7	WEST	-.70	.00	.0	5.0	9.9270	9.9270	11
	8	WEST	-.80	.00	.0	5.0	11.3608	11.3608	10
	9	WEST	-.90	.00	.0	5.0	12.7137	12.7137	8
	10	WEST	-1.00	.00	.0	5.0	13.9555	13.9555	7
	11	WEST	-1.20	.00	.0	5.0	15.7029	15.7029	5
	12	WEST	-1.50	.00	.0	5.0	17.4139	17.4139	3
	13	WEST	-2.00	.00	.0	5.0	18.4132	18.4132	1
	14	WEST	-2.50	.00	.0	5.0	17.6667	17.6667	2
	15	WEST	-3.00	.00	.0	5.0	16.5701	16.5701	4
	16	WEST	-4.00	.00	.0	5.0	14.0632	14.0632	6
	17	WEST	-5.00	.00	.0	5.0	12.0309	12.0309	9

HOUR	THETA (DEG)	SPEED (M/S)	MIXING HEIGHT(M)	TEMP (K)	STABILITY CLASS
50	90.00	5.00	300.00	298.00	6

FINAL HT (M) 43.98

DIST FIN HT (KM) .208

0	RECEPTOR NO.	NAME	EAST COORD	NORTH COORD	RECEPTOR HT ABV GRD (M)	RECEPTOR GRD-LVL ELEV (USER HT UNITS)	TOTAL FROM SIGNIF POINT SOURCES	TOTAL FROM ALL SOURCES	CONCENTRATION RANK
	1	WEST	-.10	.00	.0	5.0	7.2030	7.2030	13
	2	WEST	-.20	.00	.0	5.0	3.0428	3.0428	17
	3	WEST	-.30	.00	.0	5.0	3.8396	3.8396	16
	4	WEST	-.40	.00	.0	5.0	5.1889	5.1889	15
	5	WEST	-.50	.00	.0	5.0	6.8122	6.8122	14
	6	WEST	-.60	.00	.0	5.0	8.6210	8.6210	12
	7	WEST	-.70	.00	.0	5.0	10.5059	10.5059	11
	8	WEST	-.80	.00	.0	5.0	11.9577	11.9577	9
	9	WEST	-.90	.00	.0	5.0	13.2802	13.2802	7
	10	WEST	-1.00	.00	.0	5.0	14.4481	14.4481	6
	11	WEST	-1.20	.00	.0	5.0	15.9686	15.9686	4
	12	WEST	-1.50	.00	.0	5.0	17.2490	17.2490	2
	13	WEST	-2.00	.00	.0	5.0	17.5714	17.5714	1
	14	WEST	-2.50	.00	.0	5.0	16.4441	16.4441	3
	15	WEST	-3.00	.00	.0	5.0	15.1285	15.1285	5
	16	WEST	-4.00	.00	.0	5.0	12.5375	12.5375	8
	17	WEST	-5.00	.00	.0	5.0	10.5514	10.5514	10

Appendix B

MPTER PRINTOUTS FOR VENTING

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1                MPTER  (VERSION 81350)
                 AN AIR QUALITY DISPERSION MODEL IN
                 SECTION 2. NON-GUIDELINE MODELS.
                 IN UNAMAP (VERSION 5) DEC 82
                 SOURCE: FILE 13 ON UNAMAP MAGNETIC TAPE FROM NTIS.
0                MPTER - VERSION 81350
                 IBM PC VERSION 3.00 COPYRIGHT 1983 JAMES C. CLARY, JR

 MPTER RUN FOR MIDPAC GEOTHERMAL VENTING - H2S


0                        GENERAL INPUT INFORMATION

  THIS RUN OF MPTER-VERSION 81350 IS FOR THE POLLUTANT SO2  FOR   50   1-HOUR PERIODS.
  CONCENTRATION ESTIMATES BEGIN ON HOUR- 1, JULIAN DAY-  1, YEAR-1989.
  A FACTOR OF      1.0000000 HAS BEEN SPECIFIED TO CONVERT USER LENGTH UNITS TO KILOMETERS.
   1 SIGNIFICANT SOURCES ARE TO BE CONSIDERED.
 THIS RUN WILL NOT CONSIDER ANY POLLUTANT LOSS.
   A FACTOR OF      1.0000000 HAS BEEN SPECIFIED TO CONVERT USER HEIGHT UNITS TO METERS.
0 OPTION      OPTION LIST                OPTION SPECIFICATION : 0= IGNORE OPTION
                                                                1= USE OPTION
                      TECHNICAL OPTIONS
       1      TERRAIN ADJUSTMENTS                                1
       2      DO NOT INCLUDE STACK DOWNWASH CALCULATIONS           0
       3      DO NOT INCLUDE GRADUAL PLUME RISE CALCULATIONS       0
       4      CALCULATE INITIAL PLUME SIZE                        1
                      INPUT OPTIONS
       5      READ MET DATA FROM CARDS                           1
       6      READ HOURLY EMISSIONS                              0
       7      SPECIFY SIGNIFICANT SOURCES                         0
       8      READ RADIAL DISTANCES TO GENERATE RECEPTORS          0
                      PRINTED OUTPUT OPTIONS
       9      DELETE EMISSIONS WITH HEIGHT TABLE                   1
      10      DELETE MET DATA SUMMARY FOR AVG PERIOD               1
      11      DELETE HOURLY CONTRIBUTIONS                         1
      12      DELETE MET DATA ON HOURLY CONTRIBUTIONS              1
      13      DELETE FINAL PLUME RISE CALC ON HRLY CONTRIBUTIONS   1
      14      DELETE HOURLY SUMMARY                              0
      15      DELETE MET DATA ON HRLY SUMMARY                     0
      16      DELETE FINAL PLUME RISE CALC ON HRLY SUMMARY         0
      17      DELETE AVG-PERIOD CONTRIBUTIONS                     1
      18      DELETE AVERAGING PERIOD SUMMARY                     1
      19      DELETE AVG CONCENTRATIONS AND HI-5 TABLES            1
                      OTHER CONTROL AND OUTPUT OPTIONS
      20      RUN IS PART OF A SEGMENTED RUN                     0
      21      WRITE PARTIAL CONC TO DISK OR TAPE                  0
      22      WRITE HOUFLY CONC TO DISK OR TAPE                   0
      23      WRITE AVG-PERIOD CONC TO DISK OR TAPE                0
      24      PUNCH AVG-PERIOD CONC ONTO CARDS                    0
  ANEMOMETER HEIGHT IS:     10.00
  EXPONENTS FOR POWER- LAW WIND INCREASE WITH HEIGHT ARE: .07, .07, .10, .15, .35, .55
  TERRAIN ADJUSTMENTS ARE:  .500, .500, .500, .500, .000, .000
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1 POINT SOURCE INFORMATION

SOURCE	EAST COORD (USER UNITS)	NORTH COORD (USER UNITS)	SO2(G/SEC) EMISSIONS	PART(G/SEC) EMISSIONS	STACK HT(M)	STACK TEMP(K)	STACK DIAM(M)	STACK VEL(M/SEC)	POTEN. IMPACT (MICRO G/M**3)	EFF HT(M) USER UNITS	GRD-LVL ELEV M**4/S**3	BUOY FLUX F
1 VENTING H2S	.00	.00	18.10	.00	4.0	373.0	.3	450.0	252.75	57.86	.00	14.79

0 SIGNIFICANT SO2 POINT SOURCES

RANK	CHI-MAX (MICROGRAMS/M**3)	SOURCE NO.
1	252.75	1

0 ADDITIONAL INFORMATION ON SOURCES.
0 EMISSION INFORMATION FOR 1 (NPT) POINT SOURCES HAS BEEN INPUT
1 SIGNIFICANT POINT SOURCES(NSIGP) ARE TO BE USED FOR THIS RUN
THE ORDER OF SIGNIFICANCE(IMPS) FOR 25 OR LESS POINT SOURCES USED IN THIS RUN AS LISTED BY POINT SOURCE NUMBER:
1

0 RECEPTOR INFORMATION

0 RECEPTOR	IDENTIFICATION	EAST COORD (USER UNITS)	NORTH COORD (USER UNITS)	RECEPTOR HT ABV LOCAL GRD LVL (METERS)	RECEPTOR GROUND LEVEL ELEVATION (USER HT UNITS)
1	WEST	-.100	.000	.0	4.0
2	WEST	-.200	.000	.0	4.0
3	WEST	-.300	.000	.0	4.0
4	WEST	-.400	.000	.0	4.0
5	WEST	-.500	.000	.0	4.0
6	WEST	-.600	.000	.0	4.0
7	WEST	-.700	.000	.0	4.0
8	WEST	-.800	.000	.0	4.0
9	WEST	-.900	.000	.0	4.0
10	WEST	-1.000	.000	.0	4.0
11	WEST	-1.200	.000	.0	4.0
12	WEST	-1.500	.000	.0	4.0
13	WEST	-2.000	.000	.0	4.0
14	WEST	-2.500	.000	.0	4.0
15	WEST	-3.000	.000	.0	4.0
16	WEST	-4.000	.000	.0	4.0
17	WEST	-5.000	.000	.0	4.0

0 * ONE ASTERISK INDICATES THAT THE ASSOCIATED RECEPTOR(S) HAVE A GROUND LEVEL ELEVATION LOWER THAN THE LOWEST SOURCE BASE ELEVATIO

CAUTION SHOULD BE USED IN INTERPRETING CONCENTRATIONS FOR THESE RECEPTORS.
** TWO ASTERISKS INDICATE THAT THE ASSOCIATED RECEPTOR(S) HAVE GROUND LEVEL ELEVATIONS ABOVE THE LOWEST STACK TOP.
CONSEQUENTLY NO CALCULATIONS WILL BE PERFORMED WITH THIS RECEPTOR.A SERIES OF ASTERISKS WILL INSTEAD APPEAR IN THE OUTPUT.

HOUR	THETA (DEG)	SPEED (M/S)	MIXING HEIGHT(M)	TEMP (K)	STABILITY CLASS
1	90.00	1.00	300.00	298.00	1

FINAL HT (M) 341.50

DIST FIN HT (KM) .000

0	RECEPTOR NO.	NAME	EAST COORD	NORTH COORD	RECEPTOR HT ABV GRD (M)	RECEPTOR GRD-LVL ELEV (USER HT UNITS)	TOTAL FROM SIGNIF POINT SOURCES	TOTAL FROM ALL SOURCES	CONCENTRATION RANK
	1	WEST	-.10	.00	.0	4.0	.0000	.0000	1
	2	WEST	-.20	.00	.0	4.0	.0000	.0000	2
	3	WEST	-.30	.00	.0	4.0	.0000	.0000	3
	4	WEST	-.40	.00	.0	4.0	.0000	.0000	4
	5	WEST	-.50	.00	.0	4.0	.0000	.0000	5
	6	WEST	-.60	.00	.0	4.0	.0000	.0000	6
	7	WEST	-.70	.00	.0	4.0	.0000	.0000	7
	8	WEST	-.80	.00	.0	4.0	.0000	.0000	8
	9	WEST	-.90	.00	.0	4.0	.0000	.0000	9
	10	WEST	-1.00	.00	.0	4.0	.0000	.0000	10
	11	WEST	-1.20	.00	.0	4.0	.0000	.0000	11
	12	WEST	-1.50	.00	.0	4.0	.0000	.0000	12
	13	WEST	-2.00	.00	.0	4.0	.0000	.0000	13
	14	WEST	-2.50	.00	.0	4.0	.0000	.0000	14
	15	WEST	-3.00	.00	.0	4.0	.0000	.0000	15
	16	WEST	-4.00	.00	.0	4.0	.0000	.0000	16
	17	WEST	-5.00	.00	.0	4.0	.0000	.0000	17

HOUR	THETA (DEG)	SPEED (M/S)	MIXING HEIGHT(M)	TEMP (K)	STABILITY CLASS
2	90.00	1.50	300.00	298.00	1

FINAL HT (M) 243.90

DIST FIN HT (KM) .000

0	RECEPTOR NO.	NAME	EAST COORD	NORTH COORD	RECEPTOR HT ABV GRD (M)	RECEPTOR GRD-LVL ELEV (USER HT UNITS)	TOTAL FROM SIGNIF POINT SOURCES	TOTAL FROM ALL SOURCES	CONCENTRATION RANK
	1	WEST	-.10	.00	.0	4.0	2.0133	2.0133	17
	2	WEST	-.20	.00	.0	4.0	3.3537	3.3537	16
	3	WEST	-.30	.00	.0	4.0	7.3951	7.3951	15
	4	WEST	-.40	.00	.0	4.0	18.4558	18.4558	14
	5	WEST	-.50	.00	.0	4.0	42.3018	42.3018	9
	6	WEST	-.60	.00	.0	4.0	75.0046	75.0046	5
	7	WEST	-.70	.00	.0	4.0	91.7221	91.7221	1
	8	WEST	-.80	.00	.0	4.0	91.2295	91.2295	2
	9	WEST	-.90	.00	.0	4.0	84.5543	84.5543	3
	10	WEST	-1.00	.00	.0	4.0	77.8821	77.8821	4
	11	WEST	-1.20	.00	.0	4.0	67.2356	67.2356	6
	12	WEST	-1.50	.00	.0	4.0	55.9255	55.9255	7
	13	WEST	-2.00	.00	.0	4.0	43.9045	43.9045	8
	14	WEST	-2.50	.00	.0	4.0	36.3127	36.3127	10
	15	WEST	-3.00	.00	.0	4.0	31.0710	31.0710	11
	16	WEST	-4.00	.00	.0	4.0	24.2798	24.2798	12
	17	WEST	-5.00	.00	.0	4.0	20.0504	20.0504	13

HOUR	THETA (DEG)	SPEED (M/S)	MIXING HEIGHT(M)	TEMP (K)	STABILITY CLASS
3	90.00	2.00	300.00	298.00	1

FINAL HT (M) 183.93

DIST FIN HT (KM) .000

0	RECEPTOR NO.	NAME	EAST COORD	NORTH COORD	RECEPTOR HT ABV GRD (M)	RECEPTOR GRD-LVL ELEV (USER HT UNITS)	TOTAL FROM SIGNIF POINT SOURCES	TOTAL FROM ALL SOURCES	CONCENTRATION RANK
	1	WEST	-.10	.00	.0	4.0	2.9144	2.9144	17
	2	WEST	-.20	.00	.0	4.0	6.4149	6.4149	16
	3	WEST	-.30	.00	.0	4.0	16.9051	16.9051	14
	4	WEST	-.40	.00	.0	4.0	38.5535	38.5535	9
	5	WEST	-.50	.00	.0	4.0	63.1420	63.1420	5
	6	WEST	-.60	.00	.0	4.0	75.6816	75.6816	2
	7	WEST	-.70	.00	.0	4.0	76.0838	76.0838	1
	8	WEST	-.80	.00	.0	4.0	71.2063	71.2063	3
	9	WEST	-.90	.00	.0	4.0	65.1063	65.1063	4
	10	WEST	-1.00	.00	.0	4.0	59.6975	59.6975	6
	11	WEST	-1.20	.00	.0	4.0	51.2466	51.2466	7
	12	WEST	-1.50	.00	.0	4.0	42.4125	42.4125	8
	13	WEST	-2.00	.00	.0	4.0	33.1535	33.1535	10
	14	WEST	-2.50	.00	.0	4.0	27.3615	27.3615	11
	15	WEST	-3.00	.00	.0	4.0	23.3826	23.3826	12
	16	WEST	-4.00	.00	.0	4.0	18.2476	18.2476	13
	17	WEST	-5.00	.00	.0	4.0	15.0591	15.0591	15

HOUR	THETA (DEG)	SPEED (M/S)	MIXING HEIGHT(M)	TEMP (K)	STABILITY CLASS
4	90.00	2.50	300.00	298.00	1

FINAL HT (M) 147.94

DIST FIN HT (KM) .000

C	RECEPTOR NO.	NAME	EAST COORD	NORTH COORD	RECEPTOR HT ABV GRD (M)	RECEPTOR GRD-LVL ELEV (USER HT UNITS)	TOTAL FROM SIGNIF POINT SOURCES	TOTAL FROM ALL SOURCES	CONCENTRATION RANK
	1	WEST	-.10	.00	.0	4.0	4.0664	4.0664	17
	2	WEST	-.20	.00	.0	4.0	11.5471	11.5471	16
	3	WEST	-.30	.00	.0	4.0	31.7527	31.7527	10
	4	WEST	-.40	.00	.0	4.0	60.9318	60.9318	4
	5	WEST	-.50	.00	.0	4.0	78.3019	78.3019	1
	6	WEST	-.60	.00	.0	4.0	74.7991	74.7991	2
	7	WEST	-.70	.00	.0	4.0	65.4804	65.4804	3
	8	WEST	-.80	.00	.0	4.0	58.2960	58.2960	5
	9	WEST	-.90	.00	.0	4.0	52.7600	52.7600	6
	10	WEST	-1.00	.00	.0	4.0	48.2579	48.2579	7
	11	WEST	-1.20	.00	.0	4.0	41.3119	41.3119	8
	12	WEST	-1.50	.00	.0	4.0	34.1077	34.1077	9
	13	WEST	-2.00	.00	.0	4.0	26.6074	26.6074	11
	14	WEST	-2.50	.00	.0	4.0	21.9367	21.9367	12
	15	WEST	-3.00	.00	.0	4.0	18.7357	18.7357	13
	16	WEST	-4.00	.00	.0	4.0	14.6122	14.6122	14
	17	WEST	-5.00	.00	.0	4.0	12.0552	12.0552	15

HOUR	THETA (DEG)	SPEED (M/S)	MIXING HEIGHT(M)	TEMP (K)	STABILITY CLASS
5	90.00	3.00	300.00	298.00	1

FINAL HT (M) 123.95

DIST FIN HT (KM) .000

0 RECEPTOR NO.	NAME	EAST COORD	NORTH COORD	RECEPTOR HT ABV GRD (M)	RECEPTOR GRD-LVL ELEV (USER HT UNITS)	TOTAL FROM SIGNIF POINT SOURCES	TOTAL FROM ALL SOURCES	CONCENTRATION RANK
1	WEST	-.10	.00	.0	4.0	5.5665	5.5665	17
2	WEST	-.20	.00	.0	4.0	19.3395	19.3395	12
3	WEST	-.30	.00	.0	4.0	50.1859	50.1859	5
4	WEST	-.40	.00	.0	4.0	79.6376	79.6376	2
5	WEST	-.50	.00	.0	4.0	85.2745	85.2745	1
6	WEST	-.60	.00	.0	4.0	71.1258	71.1258	3
7	WEST	-.70	.00	.0	4.0	57.2463	57.2463	4
8	WEST	-.80	.00	.0	4.0	49.2712	49.2712	6
9	WEST	-.90	.00	.0	4.0	44.2848	44.2848	7
10	WEST	-1.00	.00	.0	4.0	40.4468	40.4468	8
11	WEST	-1.20	.00	.0	4.0	34.5716	34.5716	9
12	WEST	-1.50	.00	.0	4.0	28.5045	28.5045	10
13	WEST	-2.00	.00	.0	4.0	22.2114	22.2114	11
14	WEST	-2.50	.00	.0	4.0	18.3022	18.3022	13
15	WEST	-3.00	.00	.0	4.0	15.6266	15.6266	14
16	WEST	-4.00	.00	.0	4.0	12.1832	12.1832	15
17	WEST	-5.00	.00	.0	4.0	10.0496	10.0496	16

HOUR	THETA (DEG)	SPEED (M/S)	MIXING HEIGHT(M)	TEMP (K)	STABILITY CLASS
6	90.00	4.00	300.00	298.00	1

FINAL HT (M) 93.96

DIST FIN HT (KM) .000

0 RECEPTOR NO.	NAME	EAST COORD	NORTH COORD	RECEPTOR HT ABV GRD (M)	RECEPTOR GRD-LVL ELEV (USER HT UNITS)	TOTAL FROM SIGNIF POINT SOURCES	TOTAL FROM ALL SOURCES	CONCENTRATION RANK
1	WEST	-.10	.00	.0	4.0	10.0703	10.0703	15
2	WEST	-.20	.00	.0	4.0	43.3632	43.3632	6
3	WEST	-.30	.00	.0	4.0	87.3728	87.3728	2
4	WEST	-.40	.00	.0	4.0	100.7935	100.7935	1
5	WEST	-.50	.00	.0	4.0	85.4166	85.4166	3
6	WEST	-.60	.00	.0	4.0	61.4873	61.4873	4
7	WEST	-.70	.00	.0	4.0	45.3092	45.3092	5
8	WEST	-.80	.00	.0	4.0	37.5242	37.5242	7
9	WEST	-.90	.00	.0	4.0	33.4580	33.4580	8
10	WEST	-1.00	.00	.0	4.0	30.5111	30.5111	9
11	WEST	-1.20	.00	.0	4.0	26.0382	26.0382	10
12	WEST	-1.50	.00	.0	4.0	21.4396	21.4396	11
13	WEST	-2.00	.00	.0	4.0	16.6875	16.6875	12
14	WEST	-2.50	.00	.0	4.0	13.7428	13.7428	13
15	WEST	-3.00	.00	.0	4.0	11.7300	11.7300	14
16	WEST	-4.00	.00	.0	4.0	9.1422	9.1422	16
17	WEST	-5.00	.00	.0	4.0	7.5399	7.5399	17

HOUR	THETA (DEG)	SPEED (M/S)	MIXING HEIGHT(M)	TEMP (K)	STABILITY CLASS
7	90.00	1.00	300.00	298.00	2

FINAL HT (M) 341.50

DIST FIN HT (KM) .000

0

RECEPTOR NO.	NAME	EAST COORD	NORTH COORD	RECEPTOR HT ABV GRD (M)	RECEPTOR GRD-LVL ELEV (USER HT UNITS)	TOTAL FROM SIGNIF POINT SOURCES	TOTAL FROM ALL SOURCES	CONCENTRATION RANK
1	WEST	-.10	.00	.0	4.0	.0000	.0000	1
2	WEST	-.20	.00	.0	4.0	.0000	.0000	2
3	WEST	-.30	.00	.0	4.0	.0000	.0000	3
4	WEST	-.40	.00	.0	4.0	.0000	.0000	4
5	WEST	-.50	.00	.0	4.0	.0000	.0000	5
6	WEST	-.60	.00	.0	4.0	.0000	.0000	6
7	WEST	-.70	.00	.0	4.0	.0000	.0000	7
8	WEST	-.80	.00	.0	4.0	.0000	.0000	8
9	WEST	-.90	.00	.0	4.0	.0000	.0000	9
10	WEST	-1.00	.00	.0	4.0	.0000	.0000	10
11	WEST	-1.20	.00	.0	4.0	.0000	.0000	11
12	WEST	-1.50	.00	.0	4.0	.0000	.0000	12
13	WEST	-2.00	.00	.0	4.0	.0000	.0000	13
14	WEST	-2.50	.00	.0	4.0	.0000	.0000	14
15	WEST	-3.00	.00	.0	4.0	.0000	.0000	15
16	WEST	-4.00	.00	.0	4.0	.0000	.0000	16
17	WEST	-5.00	.00	.0	4.0	.0000	.0000	17

HOUR	THETA (DEG)	SPEED (M/S)	MIXING HEIGHT(M)	TEMP (K)	STABILITY CLASS
8	90.00	1.50	300.00	298.00	2

FINAL HT (M) 243.90

DIST FIN HT (KM) .000

0

RECEPTOR NO.	NAME	EAST COORD	NORTH COORD	RECEPTOR HT ABV GRD (M)	RECEPTOR GRD-LVL ELEV (USER HT UNITS)	TOTAL FROM SIGNIF POINT SOURCES	TOTAL FROM ALL SOURCES	CONCENTRATION RANK
1	WEST	-.10	.00	.0	4.0	1.8952	1.8952	17
2	WEST	-.20	.00	.0	4.0	2.4073	2.4073	16
3	WEST	-.30	.00	.0	4.0	3.4452	3.4452	15
4	WEST	-.40	.00	.0	4.0	5.1650	5.1650	14
5	WEST	-.50	.00	.0	4.0	8.2079	8.2079	13
6	WEST	-.60	.00	.0	4.0	12.5226	12.5226	12
7	WEST	-.70	.00	.0	4.0	17.9397	17.9397	11
8	WEST	-.80	.00	.0	4.0	24.0552	24.0552	10
9	WEST	-.90	.00	.0	4.0	30.3752	30.3752	8
10	WEST	-1.00	.00	.0	4.0	36.4443	36.4443	6
11	WEST	-1.20	.00	.0	4.0	46.5537	46.5537	4
12	WEST	-1.50	.00	.0	4.0	54.8655	54.8655	1
13	WEST	-2.00	.00	.0	4.0	54.5295	54.5295	2
14	WEST	-2.50	.00	.0	4.0	47.7389	47.7389	3
15	WEST	-3.00	.00	.0	4.0	41.2000	41.2000	5
16	WEST	-4.00	.00	.0	4.0	32.1759	32.1759	7
17	WEST	-5.00	.00	.0	4.0	26.5214	26.5214	9

HOUR	THETA (DEG)	SPEED (M/S)	MIXING HEIGHT(M)	TEMP (K)	STABILITY CLASS
9	90.00	2.00	300.00	298.00	2

FINAL HT (M) 183.93

DIST FIN HT (KM) .000

0 RECEPTOR NO.	NAME	EAST COORD	NORTH COORD	RECEPTOR HT ABV GRD (M)	RECEPTOR GRD-LVL ELEV (USER HT UNITS)	TOTAL FROM SIGNIF POINT SOURCES	TOTAL FROM ALL SOURCES	CONCENTRATION RANK
1	WEST	-.10	.00	.0	4.0	2.6254	2.6254	17
2	WEST	-.20	.00	.0	4.0	3.9078	3.9078	16
3	WEST	-.30	.00	.0	4.0	6.6611	6.6611	15
4	WEST	-.40	.00	.0	4.0	11.2237	11.2237	14
5	WEST	-.50	.00	.0	4.0	18.6367	18.6367	13
6	WEST	-.60	.00	.0	4.0	27.4166	27.4166	10
7	WEST	-.70	.00	.0	4.0	35.9456	35.9456	8
8	WEST	-.80	.00	.0	4.0	42.9303	42.9303	6
9	WEST	-.90	.00	.0	4.0	47.8277	47.8277	4
10	WEST	-1.00	.00	.0	4.0	50.7351	50.7351	2
11	WEST	-1.20	.00	.0	4.0	52.3247	52.3247	1
12	WEST	-1.50	.00	.0	4.0	49.8854	49.8854	3
13	WEST	-2.00	.00	.0	4.0	42.9373	42.9373	5
14	WEST	-2.50	.00	.0	4.0	36.2916	36.2916	7
15	WEST	-3.00	.00	.0	4.0	31.1009	31.1009	9
16	WEST	-4.00	.00	.0	4.0	24.2201	24.2201	11
17	WEST	-5.00	.00	.0	4.0	19.9403	19.9403	12

HOUR	THETA (DEG)	SPEED (M/S)	MIXING HEIGHT(M)	TEMP (K)	STABILITY CLASS
10	90.00	2.50	300.00	298.00	2

FINAL HT (M) 147.94

DIST FIN HT (KM) .000

0 RECEPTOR NO.	NAME	EAST COORD	NORTH COORD	RECEPTOR HT ABV GRD (M)	RECEPTOR GRD-LVL ELEV (USER HT UNITS)	TOTAL FROM SIGNIF POINT SOURCES	TOTAL FROM ALL SOURCES	CONCENTRATION RANK
1	WEST	-.10	.00	.0	4.0	3.4764	3.4764	17
2	WEST	-.20	.00	.0	4.0	6.1532	6.1532	16
3	WEST	-.30	.00	.0	4.0	12.0665	12.0665	15
4	WEST	-.40	.00	.0	4.0	21.2707	21.2707	12
5	WEST	-.50	.00	.0	4.0	34.1014	34.1014	9
6	WEST	-.60	.00	.0	4.0	46.1707	46.1707	7
7	WEST	-.70	.00	.0	4.0	54.9609	54.9609	5
8	WEST	-.80	.00	.0	4.0	59.8204	59.8204	3
9	WEST	-.90	.00	.0	4.0	61.3299	61.3299	1
10	WEST	-1.00	.00	.0	4.0	60.4834	60.4834	2
11	WEST	-1.20	.00	.0	4.0	55.2798	55.2798	4
12	WEST	-1.50	.00	.0	4.0	46.2160	46.2160	6
13	WEST	-2.00	.00	.0	4.0	35.6899	35.6899	8
14	WEST	-2.50	.00	.0	4.0	29.2872	29.2872	10
15	WEST	-3.00	.00	.0	4.0	24.9615	24.9615	11
16	WEST	-4.00	.00	.0	4.0	19.4090	19.4090	13
17	WEST	-5.00	.00	.0	4.0	15.9706	15.9706	14

HOUR	THETA (DEG)	SPEED (M/S)	MIXING HEIGHT(M)	TEMP (K)	STABILITY CLASS
11	90.00	3.00	300.00	298.00	2

FINAL HT (M) 123.95

DIST FIN HT (KM) .000

0 RECEPTOR NO.	NAME	EAST COORD	NORTH COORD	RECEPTOR HT ABV GRD (M)	RECEPTOR GRD-LVL ELEV (USER HT UNITS)	TOTAL FROM SIGNIF POINT SOURCES	TOTAL FROM ALL SOURCES	CONCENTRATION RANK
1	WEST	-.10	.00	.0	4.0	4.4942	4.4942	17
2	WEST	-.20	.00	.0	4.0	9.4414	9.4414	16
3	WEST	-.30	.00	.0	4.0	20.2377	20.2377	13
4	WEST	-.40	.00	.0	4.0	35.1249	35.1249	9
5	WEST	-.50	.00	.0	4.0	52.1016	52.1016	7
6	WEST	-.60	.00	.0	4.0	64.1834	64.1834	5
7	WEST	-.70	.00	.0	4.0	70.0046	70.0046	2
8	WEST	-.80	.00	.0	4.0	70.7927	70.7927	1
9	WEST	-.90	.00	.0	4.0	68.3753	68.3753	3
10	WEST	-1.00	.00	.0	4.0	64.2594	64.2594	4
11	WEST	-1.20	.00	.0	4.0	54.6099	54.6099	6
12	WEST	-1.50	.00	.0	4.0	42.3265	42.3265	8
13	WEST	-2.00	.00	.0	4.0	30.5245	30.5245	10
14	WEST	-2.50	.00	.0	4.0	24.5429	24.5429	11
15	WEST	-3.00	.00	.0	4.0	20.8397	20.8397	12
16	WEST	-4.00	.00	.0	4.0	16.1891	16.1891	14
17	WEST	-5.00	.00	.0	4.0	13.3172	13.3172	15

HOUR	THETA (DEG)	SPEED (M/S)	MIXING HEIGHT(M)	TEMP (K)	STABILITY CLASS
12	90.00	4.00	300.00	298.00	2

FINAL HT (M) 93.96

DIST FIN HT (KM) .000

0 RECEPTOR NO.	NAME	EAST COORD	NORTH COORD	RECEPTOR HT ABV GRD (M)	RECEPTOR GRD-LVL ELEV (USER HT UNITS)	TOTAL FROM SIGNIF POINT SOURCES	TOTAL FROM ALL SOURCES	CONCENTRATION RANK
1	WEST	-.10	.00	.0	4.0	7.2452	7.2452	17
2	WEST	-.20	.00	.0	4.0	20.3358	20.3358	12
3	WEST	-.30	.00	.0	4.0	45.0212	45.0212	9
4	WEST	-.40	.00	.0	4.0	68.7180	68.7180	6
5	WEST	-.50	.00	.0	4.0	85.0693	85.0693	3
6	WEST	-.60	.00	.0	4.0	89.1928	89.1928	1
7	WEST	-.70	.00	.0	4.0	85.6351	85.6351	2
8	WEST	-.80	.00	.0	4.0	78.5707	78.5707	4
9	WEST	-.90	.00	.0	4.0	70.4848	70.4848	5
10	WEST	-1.00	.00	.0	4.0	62.5966	62.5966	7
11	WEST	-1.20	.00	.0	4.0	49.1095	49.1095	8
12	WEST	-1.50	.00	.0	4.0	35.2071	35.2071	10
13	WEST	-2.00	.00	.0	4.0	23.5880	23.5880	11
14	WEST	-2.50	.00	.0	4.0	18.5230	18.5230	13
15	WEST	-3.00	.00	.0	4.0	15.6595	15.6595	14
16	WEST	-4.00	.00	.0	4.0	12.1530	12.1530	15
17	WEST	-5.00	.00	.0	4.0	9.9941	9.9941	16

HOUR	THETA (DEG)	SPEED (M/S)	MIXING HEIGHT(M)	TEMP (K)	STABILITY CLASS
13	90.00	5.00	300.00	298.00	2

FINAL HT (M) 75.97

DIST FIN HT (KM) .000

0 RECEPTOR NO.	NAME	EAST COORD	NORTH COORD	RECEPTOR HT ABV GRD (M)	RECEPTOR GRD-LVL ELEV (USER HT UNITS)	TOTAL FROM SIGNIF POINT SOURCES	TOTAL FROM ALL SOURCES	CONCENTRATION RANK
1	WEST	-.10	.00	.0	4.0	11.3653	11.3653	15
2	WEST	-.20	.00	.0	4.0	38.2314	38.2314	10
3	WEST	-.30	.00	.0	4.0	76.8921	76.8921	5
4	WEST	-.40	.00	.0	4.0	99.8569	99.8569	2
5	WEST	-.50	.00	.0	4.0	106.1591	106.1591	1
6	WEST	-.60	.00	.0	4.0	99.5772	99.5772	3
7	WEST	-.70	.00	.0	4.0	88.3771	88.3771	4
8	WEST	-.80	.00	.0	4.0	76.6840	76.6840	6
9	WEST	-.90	.00	.0	4.0	66.0705	66.0705	7
10	WEST	-1.00	.00	.0	4.0	56.9510	56.9510	8
11	WEST	-1.20	.00	.0	4.0	42.9142	42.9142	9
12	WEST	-1.50	.00	.0	4.0	29.6424	29.6424	11
13	WEST	-2.00	.00	.0	4.0	19.1616	19.1616	12
14	WEST	-2.50	.00	.0	4.0	14.8655	14.8655	13
15	WEST	-3.00	.00	.0	4.0	12.5390	12.5390	14
16	WEST	-4.00	.00	.0	4.0	9.7266	9.7266	16
17	WEST	-5.00	.00	.0	4.0	7.9976	7.9976	17

HOUR	THETA (DEG)	SPEED (M/S)	MIXING HEIGHT(M)	TEMP (K)	STABILITY CLASS
14	90.00	2.00	300.00	298.00	3

FINAL HT (M) 188.94

DIST FIN HT (KM) .000

0 RECEPTOR NO.	NAME	EAST COORD	NORTH COORD	RECEPTOR HT ABV GRD (M)	RECEPTOR GRD-LVL ELEV (USER HT UNITS)	TOTAL FROM SIGNIF POINT SOURCES	TOTAL FROM ALL SOURCES	CONCENTRATION RANK
1	WEST	-.10	.00	.0	4.0	2.3567	2.3567	17
2	WEST	-.20	.00	.0	4.0	2.8845	2.8845	16
3	WEST	-.30	.00	.0	4.0	3.7978	3.7978	15
4	WEST	-.40	.00	.0	4.0	5.1801	5.1801	14
5	WEST	-.50	.00	.0	4.0	7.1013	7.1013	13
6	WEST	-.60	.00	.0	4.0	9.5823	9.5823	12
7	WEST	-.70	.00	.0	4.0	12.5733	12.5733	11
8	WEST	-.80	.00	.0	4.0	15.9559	15.9559	10
9	WEST	-.90	.00	.0	4.0	19.5644	19.5644	9
10	WEST	-1.00	.00	.0	4.0	23.2173	23.2173	8
11	WEST	-1.20	.00	.0	4.0	30.0149	30.0149	6
12	WEST	-1.50	.00	.0	4.0	37.5237	37.5237	4
13	WEST	-2.00	.00	.0	4.0	42.4923	42.4923	1
14	WEST	-2.50	.00	.0	4.0	42.0887	42.0887	2
15	WEST	-3.00	.00	.0	4.0	39.8526	39.8526	3
16	WEST	-4.00	.00	.0	4.0	34.3481	34.3481	5
17	WEST	-5.00	.00	.0	4.0	29.2626	29.2626	7

HOUR	THETA (DEG)	SPEED (M/S)	MIXING HEIGHT(M)	TEMP (K)	STABILITY CLASS
15	90.00	2.50	300.00	298.00	3

FINAL HT (M) 151.95

DIST FIN HT (KM) .000

0 RECEPTOR NO.	NAME	EAST COORD	NORTH COORD	RECEPTOR HT ABV GRD (M)	RECEPTOR GRD-LVL ELEV (USER HT UNITS)	TOTAL FROM SIGNIF POINT SOURCES	TOTAL FROM ALL SOURCES	CONCENTRATION RANK
1	WEST	-.10	.00	.0	4.0	2.9869	2.9869	17
2	WEST	-.20	.00	.0	4.0	4.0476	4.0476	16
3	WEST	-.30	.00	.0	4.0	5.9704	5.9704	15
4	WEST	-.40	.00	.0	4.0	8.9532	8.9532	14
5	WEST	-.50	.00	.0	4.0	13.0562	13.0562	13
6	WEST	-.60	.00	.0	4.0	18.1136	18.1136	12
7	WEST	-.70	.00	.0	4.0	23.7579	23.7579	11
8	WEST	-.80	.00	.0	4.0	29.5299	29.5299	8
9	WEST	-.90	.00	.0	4.0	35.0005	35.0005	7
10	WEST	-1.00	.00	.0	4.0	39.8491	39.8491	5
11	WEST	-1.20	.00	.0	4.0	47.0500	47.0500	3
12	WEST	-1.50	.00	.0	4.0	51.7107	51.7107	1
13	WEST	-2.00	.00	.0	4.0	49.4016	49.4016	2
14	WEST	-2.50	.00	.0	4.0	43.1587	43.1587	4
15	WEST	-3.00	.00	.0	4.0	37.2883	37.2883	6
16	WEST	-4.00	.00	.0	4.0	28.9944	28.9944	9
17	WEST	-5.00	.00	.0	4.0	23.7840	23.7840	10

HOUR	THETA (DEG)	SPEED (M/S)	MIXING HEIGHT(M)	TEMP (K)	STABILITY CLASS
16	90.00	3.00	300.00	298.00	3

FINAL HT (M) 127.30

DIST FIN HT (KM) .000

0 RECEPTOR NO.	NAME	EAST COORD	NORTH COORD	RECEPTOR HT ABV GRD (M)	RECEPTOR GRD-LVL ELEV (USER HT UNITS)	TOTAL FROM SIGNIF POINT SOURCES	TOTAL FROM ALL SOURCES	CONCENTRATION RANK
1	WEST	-.10	.00	.0	4.0	3.6700	3.6700	17
2	WEST	-.20	.00	.0	4.0	5.5697	5.5697	16
3	WEST	-.30	.00	.0	4.0	9.1503	9.1503	15
4	WEST	-.40	.00	.0	4.0	14.7051	14.7051	14
5	WEST	-.50	.00	.0	4.0	22.0054	22.0054	12
6	WEST	-.60	.00	.0	4.0	30.2838	30.2838	10
7	WEST	-.70	.00	.0	4.0	38.5573	38.5573	8
8	WEST	-.80	.00	.0	4.0	45.9868	45.9868	6
9	WEST	-.90	.00	.0	4.0	52.0585	52.0585	4
10	WEST	-1.00	.00	.0	4.0	56.5834	56.5834	3
11	WEST	-1.20	.00	.0	4.0	61.3088	61.3088	1
12	WEST	-1.50	.00	.0	4.0	60.7769	60.7769	2
13	WEST	-2.00	.00	.0	4.0	51.7754	51.7754	5
14	WEST	-2.50	.00	.0	4.0	42.0100	42.0100	7
15	WEST	-3.00	.00	.0	4.0	34.4154	34.4154	9
16	WEST	-4.00	.00	.0	4.0	25.0800	25.0800	11
17	WEST	-5.00	.00	.0	4.0	20.0405	20.0405	13

HOUR	THETA (DEG)	SPEED (M/S)	MIXING HEIGHT(M)	TEMP (K)	STABILITY CLASS
17	90.00	4.00	300.00	298.00	3

FINAL HT (M) 96.47

DIST FIN HT (KM) .000

0	RECEPTOR NO.	NAME	EAST COORD	NORTH COORD	RECEPTOR HT ABV GRD (M)	RECEPTOR GRD-LVL ELEV (USER HT UNITS)	TOTAL FROM SIGNIF POINT SOURCES	TOTAL FROM ALL SOURCES	CONCENTRATION RANK
	1	WEST	-.10	.00	.0	4.0	5.2711	5.2711	17
	2	WEST	-.20	.00	.0	4.0	10.1661	10.1661	16
	3	WEST	-.30	.00	.0	4.0	19.7232	19.7232	13
	4	WEST	-.40	.00	.0	4.0	33.4007	33.4007	11
	5	WEST	-.50	.00	.0	4.0	48.4531	48.4531	9
	6	WEST	-.60	.00	.0	4.0	61.8558	61.8558	7
	7	WEST	-.70	.00	.0	4.0	71.8552	71.8552	5
	8	WEST	-.80	.00	.0	4.0	78.0896	78.0896	3
	9	WEST	-.90	.00	.0	4.0	81.0264	81.0264	2
	10	WEST	-1.00	.00	.0	4.0	81.4280	81.4280	1
	11	WEST	-1.20	.00	.0	4.0	77.5036	77.5036	4
	12	WEST	-1.50	.00	.0	4.0	66.9177	66.9177	6
	13	WEST	-2.00	.00	.0	4.0	49.7006	49.7006	8
	14	WEST	-2.50	.00	.0	4.0	37.2431	37.2431	10
	15	WEST	-3.00	.00	.0	4.0	28.8878	28.8878	12
	16	WEST	-4.00	.00	.0	4.0	19.6412	19.6412	14
	17	WEST	-5.00	.00	.0	4.0	15.2272	15.2272	15

HOUR	THETA (DEG)	SPEED (M/S)	MIXING HEIGHT(M)	TEMP (K)	STABILITY CLASS
18	90.00	5.00	300.00	298.00	3

FINAL HT (M) 77.98

DIST FIN HT (KM) .000

0	RECEPTOR NO.	NAME	EAST COORD	NORTH COORD	RECEPTOR HT ABV GRD (M)	RECEPTOR GRD-LVL ELEV (USER HT UNITS)	TOTAL FROM SIGNIF POINT SOURCES	TOTAL FROM ALL SOURCES	CONCENTRATION RANK
	1	WEST	-.10	.00	.0	4.0	7.3242	7.3242	17
	2	WEST	-.20	.00	.0	4.0	17.7125	17.7125	14
	3	WEST	-.30	.00	.0	4.0	37.2708	37.2708	11
	4	WEST	-.40	.00	.0	4.0	60.8625	60.8625	9
	5	WEST	-.50	.00	.0	4.0	80.9857	80.9857	7
	6	WEST	-.60	.00	.0	4.0	93.9199	93.9199	4
	7	WEST	-.70	.00	.0	4.0	99.8168	99.8168	2
	8	WEST	-.80	.00	.0	4.0	100.4504	100.4504	1
	9	WEST	-.90	.00	.0	4.0	97.7078	97.7078	3
	10	WEST	-1.00	.00	.0	4.0	93.0532	93.0532	5
	11	WEST	-1.20	.00	.0	4.0	81.5997	81.5997	6
	12	WEST	-1.50	.00	.0	4.0	65.0363	65.0363	8
	13	WEST	-2.00	.00	.0	4.0	44.8850	44.8850	10
	14	WEST	-2.50	.00	.0	4.0	32.3296	32.3296	12
	15	WEST	-3.00	.00	.0	4.0	24.4346	24.4346	13
	16	WEST	-4.00	.00	.0	4.0	16.0660	16.0660	15
	17	WEST	-5.00	.00	.0	4.0	12.2646	12.2646	16

HOUR	THETA (DEG)	SPEED (M/S)	MIXING HEIGHT(M)	TEMP (K)	STABILITY CLASS
19	90.00	7.00	300.00	298.00	3

FINAL HT (M) 56.84

DIST FIN HT (KM) .000

0 RECEPTOR NO.	NAME	EAST COORD	NORTH COORD	RECEPTOR HT ABV GRD (M)	RECEPTOR GRD-LVL ELEV (USER HT UNITS)	TOTAL FROM SIGNIF POINT SOURCES	TOTAL FROM ALL SOURCES	CONCENTRATION RANK
1	WEST	-.10	.00	.0	4.0	13.5586	13.5586	15
2	WEST	-.20	.00	.0	4.0	45.2792	45.2792	11
3	WEST	-.30	.00	.0	4.0	91.0894	91.0894	8
4	WEST	-.40	.00	.0	4.0	124.1752	124.1752	4
5	WEST	-.50	.00	.0	4.0	137.0638	137.0638	1
6	WEST	-.60	.00	.0	4.0	135.8326	135.8326	2
7	WEST	-.70	.00	.0	4.0	127.4584	127.4584	3
8	WEST	-.80	.00	.0	4.0	116.3811	116.3811	5
9	WEST	-.90	.00	.0	4.0	104.9035	104.9035	6
10	WEST	-1.00	.00	.0	4.0	94.0711	94.0711	7
11	WEST	-1.20	.00	.0	4.0	75.6150	75.6150	9
12	WEST	-1.50	.00	.0	4.0	55.6143	55.6143	10
13	WEST	-2.00	.00	.0	4.0	35.7817	35.7817	12
14	WEST	-2.50	.00	.0	4.0	24.8543	24.8543	13
15	WEST	-3.00	.00	.0	4.0	18.3568	18.3568	14
16	WEST	-4.00	.00	.0	4.0	11.7145	11.7145	16
17	WEST	-5.00	.00	.0	4.0	8.8162	8.8162	17

HOUR	THETA (DEG)	SPEED (M/S)	MIXING HEIGHT(M)	TEMP (K)	STABILITY CLASS
20	90.00	8.00	300.00	298.00	3

FINAL HT (M) 50.24

DIST FIN HT (KM) .000

0 RECEPTOR NO.	NAME	EAST COORD	NORTH COORD	RECEPTOR HT ABV GRD (M)	RECEPTOR GRD-LVL ELEV (USER HT UNITS)	TOTAL FROM SIGNIF POINT SOURCES	TOTAL FROM ALL SOURCES	CONCENTRATION RANK
1	WEST	-.10	.00	.0	4.0	18.1811	18.1811	14
2	WEST	-.20	.00	.0	4.0	65.9663	65.9663	10
3	WEST	-.30	.00	.0	4.0	122.3926	122.3926	5
4	WEST	-.40	.00	.0	4.0	151.4735	151.4735	2
5	WEST	-.50	.00	.0	4.0	154.9283	154.9283	1
6	WEST	-.60	.00	.0	4.0	145.2357	145.2357	3
7	WEST	-.70	.00	.0	4.0	130.8964	130.8964	4
8	WEST	-.80	.00	.0	4.0	116.0245	116.0245	6
9	WEST	-.90	.00	.0	4.0	102.2759	102.2759	7
10	WEST	-1.00	.00	.0	4.0	90.1604	90.1604	8
11	WEST	-1.20	.00	.0	4.0	70.7550	70.7550	9
12	WEST	-1.50	.00	.0	4.0	50.9379	50.9379	11
13	WEST	-2.00	.00	.0	4.0	32.1831	32.1831	12
14	WEST	-2.50	.00	.0	4.0	22.1505	22.1505	13
15	WEST	-3.00	.00	.0	4.0	16.2666	16.2666	15
16	WEST	-4.00	.00	.0	4.0	10.3039	10.3039	16
17	WEST	-5.00	.00	.0	4.0	7.7266	7.7266	17

HOUR	THETA (DEG)	SPEED (M/S)	MIXING HEIGHT(M)	TEMP (K)	STABILITY CLASS
21	90.00	9.00	300.00	298.00	3

FINAL HT (M) 45.10

DIST FIN HT (KM) .000

0

RECEPTOR NO.	NAME	EAST COORD	NORTH COORD	RECEPTOR HT ABV GRD (M)	RECEPTOR GRD-LVL ELEV (USER HT UNITS)	TOTAL FROM SIGNIF POINT SOURCES	TOTAL FROM ALL SOURCES	CONCENTRATION RANK
1	WEST	-.10	.00	.0	4.0	24.1223	24.1223	13
2	WEST	-.20	.00	.0	4.0	90.6537	90.6537	8
3	WEST	-.30	.00	.0	4.0	152.8614	152.8614	3
4	WEST	-.40	.00	.0	4.0	173.2136	173.2136	1
5	WEST	-.50	.00	.0	4.0	166.3542	166.3542	2
6	WEST	-.60	.00	.0	4.0	149.3026	149.3026	4
7	WEST	-.70	.00	.0	4.0	130.5097	130.5097	5
8	WEST	-.80	.00	.0	4.0	113.1607	113.1607	6
9	WEST	-.90	.00	.0	4.0	98.1380	98.1380	7
10	WEST	-1.00	.00	.0	4.0	85.4494	85.4494	9
11	WEST	-1.20	.00	.0	4.0	65.9171	65.9171	10
12	WEST	-1.50	.00	.0	4.0	46.7419	46.7419	11
13	WEST	-2.00	.00	.0	4.0	29.1585	29.1585	12
14	WEST	-2.50	.00	.0	4.0	19.9412	19.9412	14
15	WEST	-3.00	.00	.0	4.0	14.5864	14.5864	15
16	WEST	-4.00	.00	.0	4.0	9.1924	9.1924	16
17	WEST	-5.00	.00	.0	4.0	6.8759	6.8759	17

HOUR	THETA (DEG)	SPEED (M/S)	MIXING HEIGHT(M)	TEMP (K)	STABILITY CLASS
22	90.00	10.00	300.00	298.00	3

FINAL HT (M) 40.99

DIST FIN HT (KM) .000

0

RECEPTOR NO.	NAME	EAST COORD	NORTH COORD	RECEPTOR HT ABV GRD (M)	RECEPTOR GRD-LVL ELEV (USER HT UNITS)	TOTAL FROM SIGNIF POINT SOURCES	TOTAL FROM ALL SOURCES	CONCENTRATION RANK
1	WEST	-.10	.00	.0	4.0	31.6115	31.6115	12
2	WEST	-.20	.00	.0	4.0	118.2466	118.2466	6
3	WEST	-.30	.00	.0	4.0	180.5211	180.5211	2
4	WEST	-.40	.00	.0	4.0	189.3109	189.3109	1
5	WEST	-.50	.00	.0	4.0	172.6855	172.6855	3
6	WEST	-.60	.00	.0	4.0	149.7616	149.7616	4
7	WEST	-.70	.00	.0	4.0	127.8679	127.8679	5
8	WEST	-.80	.00	.0	4.0	109.0346	109.0346	7
9	WEST	-.90	.00	.0	4.0	93.4108	93.4108	8
10	WEST	-1.00	.00	.0	4.0	80.5885	80.5885	9
11	WEST	-1.20	.00	.0	4.0	61.3848	61.3848	10
12	WEST	-1.50	.00	.0	4.0	43.0481	43.0481	11
13	WEST	-2.00	.00	.0	4.0	26.6068	26.6068	13
14	WEST	-2.50	.00	.0	4.0	18.1124	18.1124	14
15	WEST	-3.00	.00	.0	4.0	13.2110	13.2110	15
16	WEST	-4.00	.00	.0	4.0	8.2950	8.2950	16
17	WEST	-5.00	.00	.0	4.0	6.1934	6.1934	17

HOUR	THETA (DEG)	SPEED (M/S)	MIXING HEIGHT(M)	TEMP (K)	STABILITY CLASS
23	90.00	1.00	300.00	298.00	4

FINAL HT (M) 341.50

DIST FIN HT (KM) .000

0 RECEPTOR NO.	NAME	EAST COORD	NORTH COORD	RECEPTOR HT ABV GRD (M)	RECEPTOR GRD-LVL ELEV (USER HT UNITS)	TOTAL FROM SIGNIF POINT SOURCES	TOTAL FROM ALL SOURCES	CONCENTRATION RANK
1	WEST	-.10	.00	.0	4.0	.0000	.0000	1
2	WEST	-.20	.00	.0	4.0	.0000	.0000	2
3	WEST	-.30	.00	.0	4.0	.0000	.0000	3
4	WEST	-.40	.00	.0	4.0	.0000	.0000	4
5	WEST	-.50	.00	.0	4.0	.0000	.0000	5
6	WEST	-.60	.00	.0	4.0	.0000	.0000	6
7	WEST	-.70	.00	.0	4.0	.0000	.0000	7
8	WEST	-.80	.00	.0	4.0	.0000	.0000	8
9	WEST	-.90	.00	.0	4.0	.0000	.0000	9
10	WEST	-1.00	.00	.0	4.0	.0000	.0000	10
11	WEST	-1.20	.00	.0	4.0	.0000	.0000	11
12	WEST	-1.50	.00	.0	4.0	.0000	.0000	12
13	WEST	-2.00	.00	.0	4.0	.0000	.0000	13
14	WEST	-2.50	.00	.0	4.0	.0000	.0000	14
15	WEST	-3.00	.00	.0	4.0	.0000	.0000	15
16	WEST	-4.00	.00	.0	4.0	.0000	.0000	16
17	WEST	-5.00	.00	.0	4.0	.0000	.0000	17

HOUR	THETA (DEG)	SPEED (M/S)	MIXING HEIGHT(M)	TEMP (K)	STABILITY CLASS
24	90.00	1.50	300.00	298.00	4

FINAL HT (M) 262.15

DIST FIN HT (KM) .000

0 RECEPTOR NO.	NAME	EAST COORD	NORTH COORD	RECEPTOR HT ABV GRD (M)	RECEPTOR GRD-LVL ELEV (USER HT UNITS)	TOTAL FROM SIGNIF POINT SOURCES	TOTAL FROM ALL SOURCES	CONCENTRATION RANK
1	WEST	-.10	.00	.0	4.0	1.6584	1.6584	17
2	WEST	-.20	.00	.0	4.0	1.7211	1.7211	16
3	WEST	-.30	.00	.0	4.0	1.8135	1.8135	15
4	WEST	-.40	.00	.0	4.0	1.9197	1.9197	14
5	WEST	-.50	.00	.0	4.0	2.0457	2.0457	13
6	WEST	-.60	.00	.0	4.0	2.1918	2.1918	12
7	WEST	-.70	.00	.0	4.0	2.3588	2.3588	11
8	WEST	-.80	.00	.0	4.0	2.5474	2.5474	10
9	WEST	-.90	.00	.0	4.0	2.7587	2.7587	9
10	WEST	-1.00	.00	.0	4.0	2.9934	2.9934	8
11	WEST	-1.20	.00	.0	4.0	3.3460	3.3460	7
12	WEST	-1.50	.00	.0	4.0	3.9208	3.9208	6
13	WEST	-2.00	.00	.0	4.0	4.9901	4.9901	5
14	WEST	-2.50	.00	.0	4.0	6.1676	6.1676	4
15	WEST	-3.00	.00	.0	4.0	7.4098	7.4098	3
16	WEST	-4.00	.00	.0	4.0	9.6113	9.6113	2
17	WEST	-5.00	.00	.0	4.0	11.6084	11.6084	1

HOUR	THETA (DEG)	SPEED (M/S)	MIXING HEIGHT(M)	TEMP (K)	STABILITY CLASS
25	90.00	2.00	300.00	298.00	4

FINAL HT (M) 197.61

DIST FIN HT (KM) .000

0	RECEPTOR NO.	NAME	EAST COORD	NORTH COORD	RECEPTOR HT ABV GRD (M)	RECEPTOR GRD-LVL ELEV (USER HT UNITS)	TOTAL FROM SIGNIF POINT SOURCES	TOTAL FROM ALL SOURCES	CONCENTRATION RANK
	1	WEST	-.10	.00	.0	4.0	2.1428	2.1428	17
	2	WEST	-.20	.00	.0	4.0	2.2865	2.2865	16
	3	WEST	-.30	.00	.0	4.0	2.5022	2.5022	15
	4	WEST	-.40	.00	.0	4.0	2.7558	2.7558	14
	5	WEST	-.50	.00	.0	4.0	3.0632	3.0632	13
	6	WEST	-.60	.00	.0	4.0	3.4266	3.4266	12
	7	WEST	-.70	.00	.0	4.0	3.8484	3.8484	11
	8	WEST	-.80	.00	.0	4.0	4.3304	4.3304	10
	9	WEST	-.90	.00	.0	4.0	4.8732	4.8732	9
	10	WEST	-1.00	.00	.0	4.0	5.4766	5.4766	8
	11	WEST	-1.20	.00	.0	4.0	6.3852	6.3852	7
	12	WEST	-1.50	.00	.0	4.0	7.8213	7.8213	6
	13	WEST	-2.00	.00	.0	4.0	10.2677	10.2677	5
	14	WEST	-2.50	.00	.0	4.0	12.5797	12.5797	4
	15	WEST	-3.00	.00	.0	4.0	14.6019	14.6019	3
	16	WEST	-4.00	.00	.0	4.0	17.1423	17.1423	2
	17	WEST	-5.00	.00	.0	4.0	18.4990	18.4990	1

HOUR	THETA (DEG)	SPEED (M/S)	MIXING HEIGHT(M)	TEMP (K)	STABILITY CLASS
26	90.00	2.50	300.00	298.00	4

FINAL HT (M) 158.89

DIST FIN HT (KM) .000

0	RECEPTOR NO.	NAME	EAST COORD	NORTH COORD	RECEPTOR HT ABV GRD (M)	RECEPTOR GRD-LVL ELEV (USER HT UNITS)	TOTAL FROM SIGNIF POINT SOURCES	TOTAL FROM ALL SOURCES	CONCENTRATION RANK
	1	WEST	-.10	.00	.0	4.0	2.6380	2.6380	17
	2	WEST	-.20	.00	.0	4.0	2.9179	2.9179	16
	3	WEST	-.30	.00	.0	4.0	3.3481	3.3481	15
	4	WEST	-.40	.00	.0	4.0	3.8677	3.8677	14
	5	WEST	-.50	.00	.0	4.0	4.5117	4.5117	13
	6	WEST	-.60	.00	.0	4.0	5.2861	5.2861	12
	7	WEST	-.70	.00	.0	4.0	6.1944	6.1944	11
	8	WEST	-.80	.00	.0	4.0	7.2355	7.2355	10
	9	WEST	-.90	.00	.0	4.0	8.4035	8.4035	9
	10	WEST	-1.00	.00	.0	4.0	9.6875	9.6875	8
	11	WEST	-1.20	.00	.0	4.0	11.5787	11.5787	7
	12	WEST	-1.50	.00	.0	4.0	14.3988	14.3988	6
	13	WEST	-2.00	.00	.0	4.0	18.6464	18.6464	5
	14	WEST	-2.50	.00	.0	4.0	21.9706	21.9706	4
	15	WEST	-3.00	.00	.0	4.0	24.2869	24.2869	3
	16	WEST	-4.00	.00	.0	4.0	25.9583	25.9583	1
	17	WEST	-5.00	.00	.0	4.0	25.7707	25.7707	2

HOUR	THETA (DEG)	SPEED (M/S)	MIXING HEIGHT(M)	TEMP (K)	STABILITY CLASS
27	90.00	3.00	300.00	298.00	4

FINAL HT (M) 133.08
DIST FIN HT (KM) .000

0	RECEPTOR NO.	NAME	EAST COORD	NORTH COORD	RECEPTOR HT ABV GRD (M)	RECEPTOR GRD-LVL ELEV (USER HT UNITS)	TOTAL FROM SIGNIF POINT SOURCES	TOTAL FROM ALL SOURCES	CONCENTRATION RANK
	1	WEST	-.10	.00	.0	4.0	3.1294	3.1294	17
	2	WEST	-.20	.00	.0	4.0	3.6136	3.6136	16
	3	WEST	-.30	.00	.0	4.0	4.3779	4.3779	15
	4	WEST	-.40	.00	.0	4.0	5.3253	5.3253	14
	5	WEST	-.50	.00	.0	4.0	6.5204	6.5204	13
	6	WEST	-.60	.00	.0	4.0	7.9703	7.9703	12
	7	WEST	-.70	.00	.0	4.0	9.6689	9.6689	11
	8	WEST	-.80	.00	.0	4.0	11.5957	11.5957	10
	9	WEST	-.90	.00	.0	4.0	13.7167	13.7167	9
	10	WEST	-1.00	.00	.0	4.0	15.9874	15.9874	8
	11	WEST	-1.20	.00	.0	4.0	19.1595	19.1595	7
	12	WEST	-1.50	.00	.0	4.0	23.4799	23.4799	6
	13	WEST	-2.00	.00	.0	4.0	28.9641	28.9641	5
	14	WEST	-2.50	.00	.0	4.0	32.2346	32.2346	3
	15	WEST	-3.00	.00	.0	4.0	33.7270	33.7270	1
	16	WEST	-4.00	.00	.0	4.0	33.0290	33.0290	2
	17	WEST	-5.00	.00	.0	4.0	30.6689	30.6689	4

HOUR	THETA (DEG)	SPEED (M/S)	MIXING HEIGHT(M)	TEMP (K)	STABILITY CLASS
28	90.00	4.00	300.00	298.00	4

FINAL HT (M) 100.81
DIST FIN HT (KM) .000

0	RECEPTOR NO.	NAME	EAST COORD	NORTH COORD	RECEPTOR HT ABV GRD (M)	RECEPTOR GRD-LVL ELEV (USER HT UNITS)	TOTAL FROM SIGNIF POINT SOURCES	TOTAL FROM ALL SOURCES	CONCENTRATION RANK
	1	WEST	-.10	.00	.0	4.0	4.1232	4.1232	17
	2	WEST	-.20	.00	.0	4.0	5.2862	5.2862	16
	3	WEST	-.30	.00	.0	4.0	7.2272	7.2272	15
	4	WEST	-.40	.00	.0	4.0	9.7336	9.7336	14
	5	WEST	-.50	.00	.0	4.0	12.9349	12.9349	13
	6	WEST	-.60	.00	.0	4.0	16.7624	16.7624	12
	7	WEST	-.70	.00	.0	4.0	21.0742	21.0742	11
	8	WEST	-.80	.00	.0	4.0	25.6800	25.6800	10
	9	WEST	-.90	.00	.0	4.0	30.3740	30.3740	9
	10	WEST	-1.00	.00	.0	4.0	34.9643	34.9643	7
	11	WEST	-1.20	.00	.0	4.0	40.3056	40.3056	6
	12	WEST	-1.50	.00	.0	4.0	45.8616	45.8616	4
	13	WEST	-2.00	.00	.0	4.0	49.7700	49.7700	1
	14	WEST	-2.50	.00	.0	4.0	49.4925	49.4925	2
	15	WEST	-3.00	.00	.0	4.0	47.1781	47.1781	3
	16	WEST	-4.00	.00	.0	4.0	40.5390	40.5390	5
	17	WEST	-5.00	.00	.0	4.0	34.3933	34.3933	8

HOUR	THETA (DEG)	SPEED (M/S)	MIXING HEIGHT(M)	TEMP (K)	STABILITY CLASS
29	90.00	5.00	300.00	298.00	4

FINAL HT (M) 81.45

DIST FIN HT (KM) .000

0 RECEPTOR NO.	NAME	EAST COORD	NORTH COORD	RECEPTOR HT ABV GRD (M)	RECEPTOR GRD-LVL ELEV (USER HT UNITS)	TOTAL FROM SIGNIF POINT SOURCES	TOTAL FROM ALL SOURCES	CONCENTRATION RANK
1	WEST	-.10	.00	.0	4.0	5.1676	5.1676	17
2	WEST	-.20	.00	.0	4.0	7.4973	7.4973	16
3	WEST	-.30	.00	.0	4.0	11.5865	11.5865	15
4	WEST	-.40	.00	.0	4.0	16.9504	16.9504	14
5	WEST	-.50	.00	.0	4.0	23.6329	23.6329	13
6	WEST	-.60	.00	.0	4.0	31.1760	31.1760	12
7	WEST	-.70	.00	.0	4.0	39.0012	39.0012	10
8	WEST	-.80	.00	.0	4.0	46.5592	46.5592	8
9	WEST	-.90	.00	.0	4.0	53.4273	53.4273	6
10	WEST	-1.00	.00	.0	4.0	59.3416	59.3416	4
11	WEST	-1.20	.00	.0	4.0	64.3451	64.3451	3
12	WEST	-1.50	.00	.0	4.0	67.2150	67.2150	1
13	WEST	-2.00	.00	.0	4.0	64.9817	64.9817	2
14	WEST	-2.50	.00	.0	4.0	59.3173	59.3173	5
15	WEST	-3.00	.00	.0	4.0	53.0429	53.0429	7
16	WEST	-4.00	.00	.0	4.0	41.9880	41.9880	9
17	WEST	-5.00	.00	.0	4.0	33.7982	33.7982	11

HOUR	THETA (DEG)	SPEED (M/S)	MIXING HEIGHT(M)	TEMP (K)	STABILITY CLASS
30	90.00	7.00	300.00	298.00	4

FINAL HT (M) 59.32

DIST FIN HT (KM) .000

0 RECEPTOR NO.	NAME	EAST COORD	NORTH COORD	RECEPTOR HT ABV GRD (M)	RECEPTOR GRD-LVL ELEV (USER HT UNITS)	TOTAL FROM SIGNIF POINT SOURCES	TOTAL FROM ALL SOURCES	CONCENTRATION RANK
1	WEST	-.10	.00	.0	4.0	7.5762	7.5762	17
2	WEST	-.20	.00	.0	4.0	14.4510	14.4510	16
3	WEST	-.30	.00	.0	4.0	27.1768	27.1768	15
4	WEST	-.40	.00	.0	4.0	42.8432	42.8432	12
5	WEST	-.50	.00	.0	4.0	59.6017	59.6017	10
6	WEST	-.60	.00	.0	4.0	74.9243	74.9243	8
7	WEST	-.70	.00	.0	4.0	87.2727	87.2727	6
8	WEST	-.80	.00	.0	4.0	96.1480	96.1480	4
9	WEST	-.90	.00	.0	4.0	101.7403	101.7403	2
10	WEST	-1.00	.00	.0	4.0	104.5657	104.5657	1
11	WEST	-1.20	.00	.0	4.0	101.4753	101.4753	3
12	WEST	-1.50	.00	.0	4.0	92.8477	92.8477	5
13	WEST	-2.00	.00	.0	4.0	76.9020	76.9020	7
14	WEST	-2.50	.00	.0	4.0	63.3585	63.3585	9
15	WEST	-3.00	.00	.0	4.0	52.7459	52.7459	11
16	WEST	-4.00	.00	.0	4.0	38.2859	38.2859	13
17	WEST	-5.00	.00	.0	4.0	29.2293	29.2293	14

HOUR	THETA (DEG)	SPEED (M/S)	MIXING HEIGHT(M)	TEMP (K)	STABILITY CLASS
31	90.00	8.00	300.00	298.00	4

FINAL HT (M) 52.40

DIST FIN HT (KM) .000

RECEPTOR NO.	NAME	EAST COORD	NORTH COORD	RECEPTOR HT ABV GRD (M)	RECEPTOR GRD-LVL ELEV (USER HT UNITS)	TOTAL FROM SIGNIF POINT SOURCES	TOTAL FROM ALL SOURCES	CONCENTRATION RANK
1	WEST	-.10	.00	.0	4.0	9.0261	9.0261	17
2	WEST	-.20	.00	.0	4.0	19.7065	19.7065	16
3	WEST	-.30	.00	.0	4.0	39.3631	39.3631	13
4	WEST	-.40	.00	.0	4.0	61.7975	61.7975	10
5	WEST	-.50	.00	.0	4.0	83.2075	83.2075	8
6	WEST	-.60	.00	.0	4.0	100.2277	100.2277	6
7	WEST	-.70	.00	.0	4.0	111.7750	111.7750	5
8	WEST	-.80	.00	.0	4.0	118.2608	118.2608	3
9	WEST	-.90	.00	.0	4.0	120.7045	120.7045	1
10	WEST	-1.00	.00	.0	4.0	120.1993	120.1993	2
11	WEST	-1.20	.00	.0	4.0	111.9127	111.9127	4
12	WEST	-1.50	.00	.0	4.0	97.8491	97.8491	7
13	WEST	-2.00	.00	.0	4.0	77.1865	77.1865	9
14	WEST	-2.50	.00	.0	4.0	61.6956	61.6956	11
15	WEST	-3.00	.00	.0	4.0	50.3291	50.3291	12
16	WEST	-4.00	.00	.0	4.0	35.6727	35.6727	14
17	WEST	-5.00	.00	.0	4.0	26.8524	26.8524	15

HOUR	THETA (DEG)	SPEED (M/S)	MIXING HEIGHT(M)	TEMP (K)	STABILITY CLASS
32	90.00	9.00	300.00	298.00	4

FINAL HT (M) 47.03

DIST FIN HT (KM) .000

RECEPTOR NO.	NAME	EAST COORD	NORTH COORD	RECEPTOR HT ABV GRD (M)	RECEPTOR GRD-LVL ELEV (USER HT UNITS)	TOTAL FROM SIGNIF POINT SOURCES	TOTAL FROM ALL SOURCES	CONCENTRATION RANK
1	WEST	-.10	.00	.0	4.0	10.6998	10.6998	17
2	WEST	-.20	.00	.0	4.0	26.4943	26.4943	15
3	WEST	-.30	.00	.0	4.0	54.7454	54.7454	12
4	WEST	-.40	.00	.0	4.0	83.9514	83.9514	9
5	WEST	-.50	.00	.0	4.0	108.3610	108.3610	7
6	WEST	-.60	.00	.0	4.0	124.7967	124.7967	5
7	WEST	-.70	.00	.0	4.0	133.5378	133.5378	3
8	WEST	-.80	.00	.0	4.0	136.2830	136.2830	1
9	WEST	-.90	.00	.0	4.0	134.8850	134.8850	2
10	WEST	-1.00	.00	.0	4.0	130.8655	130.8655	4
11	WEST	-1.20	.00	.0	4.0	117.8746	117.8746	6
12	WEST	-1.50	.00	.0	4.0	99.4981	99.4981	8
13	WEST	-2.00	.00	.0	4.0	75.6642	75.6642	10
14	WEST	-2.50	.00	.0	4.0	59.1496	59.1496	11
15	WEST	-3.00	.00	.0	4.0	47.5486	47.5486	13
16	WEST	-4.00	.00	.0	4.0	33.1336	33.1336	14
17	WEST	-5.00	.00	.0	4.0	24.6930	24.6930	16

HOUR	THETA (DEG)	SPEED (M/S)	MIXING HEIGHT(M)	TEMP (K)	STABILITY CLASS
33	90.00	10.00	300.00	298.00	4

FINAL HT (M) 42.72

DIST FIN HT (KM) .000

0	RECEPTOR NO.	NAME	EAST COORD	NORTH COORD	RECEPTOR HT ABV GRD (M)	RECEPTOR GRD-LVL ELEV (USER HT UNITS)	TOTAL FROM SIGNIF POINT SOURCES	TOTAL FROM ALL SOURCES	CONCENTRATION RANK
	1	WEST	-.10	.00	.0	4.0	12.6451	12.6451	17
	2	WEST	-.20	.00	.0	4.0	35.0417	35.0417	14
	3	WEST	-.30	.00	.0	4.0	73.1557	73.1557	11
	4	WEST	-.40	.00	.0	4.0	108.1804	108.1804	8
	5	WEST	-.50	.00	.0	4.0	133.3504	133.3504	6
	6	WEST	-.60	.00	.0	4.0	147.0575	147.0575	3
	7	WEST	-.70	.00	.0	4.0	151.5917	151.5917	1
	8	WEST	-.80	.00	.0	4.0	149.9653	149.9653	2
	9	WEST	-.90	.00	.0	4.0	144.6557	144.6557	4
	10	WEST	-1.00	.00	.0	4.0	137.3883	137.3883	5
	11	WEST	-1.20	.00	.0	4.0	120.5190	120.5190	7
	12	WEST	-1.50	.00	.0	4.0	98.9729	98.9729	9
	13	WEST	-2.00	.00	.0	4.0	73.1876	73.1876	10
	14	WEST	-2.50	.00	.0	4.0	56.2664	56.2664	12
	15	WEST	-3.00	.00	.0	4.0	44.7395	44.7395	13
	16	WEST	-4.00	.00	.0	4.0	30.7875	30.7875	15
	17	WEST	-5.00	.00	.0	4.0	22.7772	22.7772	16

HOUR	THETA (DEG)	SPEED (M/S)	MIXING HEIGHT(M)	TEMP (K)	STABILITY CLASS
34	90.00	12.00	300.00	298.00	4

FINAL HT (M) 36.27

DIST FIN HT (KM) .000

0	RECEPTOR NO.	NAME	EAST COORD	NORTH COORD	RECEPTOR HT ABV GRD (M)	RECEPTOR GRD-LVL ELEV (USER HT UNITS)	TOTAL FROM SIGNIF POINT SOURCES	TOTAL FROM ALL SOURCES	CONCENTRATION RANK
	1	WEST	-.10	.00	.0	4.0	17.5550	17.5550	17
	2	WEST	-.20	.00	.0	4.0	58.0162	58.0162	12
	3	WEST	-.30	.00	.0	4.0	117.0861	117.0861	9
	4	WEST	-.40	.00	.0	4.0	158.0272	158.0272	5
	5	WEST	-.50	.00	.0	4.0	177.9443	177.9443	2
	6	WEST	-.60	.00	.0	4.0	181.8308	181.8308	1
	7	WEST	-.70	.00	.0	4.0	176.2774	176.2774	3
	8	WEST	-.80	.00	.0	4.0	166.0534	166.0534	4
	9	WEST	-.90	.00	.0	4.0	154.0155	154.0155	6
	10	WEST	-1.00	.00	.0	4.0	141.7165	141.7165	7
	11	WEST	-1.20	.00	.0	4.0	119.6222	119.6222	8
	12	WEST	-1.50	.00	.0	4.0	94.4713	94.4713	10
	13	WEST	-2.00	.00	.0	4.0	67.1901	67.1901	11
	14	WEST	-2.50	.00	.0	4.0	50.4884	50.4884	13
	15	WEST	-3.00	.00	.0	4.0	39.5550	39.5550	14
	16	WEST	-4.00	.00	.0	4.0	26.7645	26.7645	15
	17	WEST	-5.00	.00	.0	4.0	19.6082	19.6082	16

HOUR	THETA (DEG)	SPEED (M/S)	MIXING HEIGHT(M)	TEMP (K)	STABILITY CLASS
35	90.00	15.00	300.00	298.00	4

FINAL HT (M) 29.82

DIST FIN HT (KM) .000

0 RECEPTOR NO.	NAME	EAST COORD	NORTH COORD	RECEPTOR HT ABV GRD (M)	RECEPTOR GRD-LVL ELEV (USER HT UNITS)	TOTAL FROM SIGNIF POINT SOURCES	TOTAL FROM ALL SOURCES	CONCENTRATION RANK
1	WEST	-.10	.00	.0	4.0	28.2817	28.2817	15
2	WEST	-.20	.00	.0	4.0	107.1788	107.1788	10
3	WEST	-.30	.00	.0	4.0	190.2418	190.2418	5
4	WEST	-.40	.00	.0	4.0	222.9198	222.9198	2
5	WEST	-.50	.00	.0	4.0	224.0963	224.0963	1
6	WEST	-.60	.00	.0	4.0	210.2089	210.2089	3
7	WEST	-.70	.00	.0	4.0	191.0929	191.0929	4
8	WEST	-.80	.00	.0	4.0	171.4067	171.4067	6
9	WEST	-.90	.00	.0	4.0	153.0639	153.0639	7
10	WEST	-1.00	.00	.0	4.0	136.6930	136.6930	8
11	WEST	-1.20	.00	.0	4.0	111.3607	111.3607	9
12	WEST	-1.50	.00	.0	4.0	84.9067	84.9067	11
13	WEST	-2.00	.00	.0	4.0	58.3529	58.3529	12
14	WEST	-2.50	.00	.0	4.0	42.9896	42.9896	13
15	WEST	-3.00	.00	.0	4.0	33.2558	33.2558	14
16	WEST	-4.00	.00	.0	4.0	22.1823	22.1823	16
17	WEST	-5.00	.00	.0	4.0	16.1178	16.1178	17

HOUR	THETA (DEG)	SPEED (M/S)	MIXING HEIGHT(M)	TEMP (K)	STABILITY CLASS
36	90.00	20.00	300.00	298.00	4

FINAL HT (M) 23.36

DIST FIN HT (KM) .000

0 RECEPTOR NO.	NAME	EAST COORD	NORTH COORD	RECEPTOR HT ABV GRD (M)	RECEPTOR GRD-LVL ELEV (USER HT UNITS)	TOTAL FROM SIGNIF POINT SOURCES	TOTAL FROM ALL SOURCES	CONCENTRATION RANK
1	WEST	-.10	.00	.0	4.0	58.6089	58.6089	12
2	WEST	-.20	.00	.0	4.0	214.6122	214.6122	5
3	WEST	-.30	.00	.0	4.0	293.8573	293.8573	1
4	WEST	-.40	.00	.0	4.0	285.9060	285.9060	2
5	WEST	-.50	.00	.0	4.0	253.2377	253.2377	3
6	WEST	-.60	.00	.0	4.0	217.7204	217.7204	4
7	WEST	-.70	.00	.0	4.0	186.0543	186.0543	6
8	WEST	-.80	.00	.0	4.0	159.5003	159.5003	7
9	WEST	-.90	.00	.0	4.0	137.6563	137.6563	8
10	WEST	-1.00	.00	.0	4.0	119.7387	119.7387	9
11	WEST	-1.20	.00	.0	4.0	94.6045	94.6045	10
12	WEST	-1.50	.00	.0	4.0	70.0129	70.0129	11
13	WEST	-2.00	.00	.0	4.0	46.7648	46.7648	13
14	WEST	-2.50	.00	.0	4.0	33.8985	33.8985	14
15	WEST	-3.00	.00	.0	4.0	25.9541	25.9541	15
16	WEST	-4.00	.00	.0	4.0	17.1128	17.1128	16
17	WEST	-5.00	.00	.0	4.0	12.3522	12.3522	17

HOUR	THETA (DEG)	SPEED (M/S)	MIXING HEIGHT(M)	TEMP (K)	STABILITY CLASS
37	90.00	1.00	300.00	298.00	5

FINAL HT (M) 75.81

DIST FIN HT (KM) .081

0	RECEPTOR NO.	NAME	EAST COORD	NORTH COORD	RECEPTOR HT ABV GRD (M)	RECEPTOR GRD-LVL ELEV (USER HT UNITS)	TOTAL FROM SIGNIF POINT SOURCES	TOTAL FROM ALL SOURCES	CONCENTRATION RANK
	1	WEST	-.10	.00	.0	4.0	33.7362	33.7362	17
	2	WEST	-.20	.00	.0	4.0	41.8563	41.8563	16
	3	WEST	-.30	.00	.0	4.0	54.1059	54.1059	15
	4	WEST	-.40	.00	.0	4.0	68.3893	68.3893	14
	5	WEST	-.50	.00	.0	4.0	85.4904	85.4904	13
	6	WEST	-.60	.00	.0	4.0	104.9936	104.9936	12
	7	WEST	-.70	.00	.0	4.0	126.2790	126.2790	11
	8	WEST	-.80	.00	.0	4.0	148.6115	148.6115	10
	9	WEST	-.90	.00	.0	4.0	171.2355	171.2355	9
	10	WEST	-1.00	.00	.0	4.0	193.4534	193.4534	8
	11	WEST	-1.20	.00	.0	4.0	222.0075	222.0075	6
	12	WEST	-1.50	.00	.0	4.0	254.0292	254.0292	4
	13	WEST	-2.00	.00	.0	4.0	281.7379	281.7379	2
	14	WEST	-2.50	.00	.0	4.0	281.9927	281.9927	1
	15	WEST	-3.00	.00	.0	4.0	272.7885	272.7885	3
	16	WEST	-4.00	.00	.0	4.0	243.9461	243.9461	5
	17	WEST	-5.00	.00	.0	4.0	212.4389	212.4389	7

HOUR	THETA (DEG)	SPEED (M/S)	MIXING HEIGHT(M)	TEMP (K)	STABILITY CLASS
38	90.00	1.50	300.00	298.00	5

FINAL HT (M) 73.81

DIST FIN HT (KM) .088

0	RECEPTOR NO.	NAME	EAST COORD	NORTH COORD	RECEPTOR HT ABV GRD (M)	RECEPTOR GRD-LVL ELEV (USER HT UNITS)	TOTAL FROM SIGNIF POINT SOURCES	TOTAL FROM ALL SOURCES	CONCENTRATION RANK
	1	WEST	-.10	.00	.0	4.0	33.0183	33.0183	17
	2	WEST	-.20	.00	.0	4.0	41.4286	41.4286	16
	3	WEST	-.30	.00	.0	4.0	54.1767	54.1767	15
	4	WEST	-.40	.00	.0	4.0	69.0748	69.0748	14
	5	WEST	-.50	.00	.0	4.0	86.8895	86.8895	13
	6	WEST	-.60	.00	.0	4.0	107.1231	107.1231	12
	7	WEST	-.70	.00	.0	4.0	129.0637	129.0637	11
	8	WEST	-.80	.00	.0	4.0	151.8935	151.8935	10
	9	WEST	-.90	.00	.0	4.0	174.7975	174.7975	9
	10	WEST	-1.00	.00	.0	4.0	197.0471	197.0471	8
	11	WEST	-1.20	.00	.0	4.0	225.0059	225.0059	6
	12	WEST	-1.50	.00	.0	4.0	255.3138	255.3138	4
	13	WEST	-2.00	.00	.0	4.0	279.4339	279.4339	1
	14	WEST	-2.50	.00	.0	4.0	276.8945	276.8945	2
	15	WEST	-3.00	.00	.0	4.0	265.6964	265.6964	3
	16	WEST	-4.00	.00	.0	4.0	234.7831	234.7831	5
	17	WEST	-5.00	.00	.0	4.0	202.9676	202.9676	7

HOUR	THETA (DEG)	SPEED (M/S)	MIXING HEIGHT(M)	TEMP (K)	STABILITY CLASS
39	90.00	2.00	300.00	298.00	5

FINAL HT (M) 67.42

DIST FIN HT (KM) .117

0 RECEPTOR NO.	NAME	EAST COORD	NORTH COORD	RECEPTOR HT ABV GRD (M)	RECEPTOR GRD-LVL ELEV (USER HT UNITS)	TOTAL FROM SIGNIF POINT SOURCES	TOTAL FROM ALL SOURCES	CONCENTRATION RANK
1	WEST	-.10	.00	.0	4.0	39.3561	39.3561	17
2	WEST	-.20	.00	.0	4.0	40.2780	40.2780	16
3	WEST	-.30	.00	.0	4.0	54.9046	54.9046	15
4	WEST	-.40	.00	.0	4.0	72.0841	72.0841	14
5	WEST	-.50	.00	.0	4.0	92.4551	92.4551	13
6	WEST	-.60	.00	.0	4.0	115.1558	115.1558	12
7	WEST	-.70	.00	.0	4.0	139.1054	139.1054	11
8	WEST	-.80	.00	.0	4.0	163.1964	163.1964	10
9	WEST	-.90	.00	.0	4.0	186.4455	186.4455	8
10	WEST	-1.00	.00	.0	4.0	208.0816	208.0816	6
11	WEST	-1.20	.00	.0	4.0	232.8363	232.8363	5
12	WEST	-1.50	.00	.0	4.0	256.0100	256.0100	3
13	WEST	-2.00	.00	.0	4.0	267.3622	267.3622	1
14	WEST	-2.50	.00	.0	4.0	256.0646	256.0646	2
15	WEST	-3.00	.00	.0	4.0	239.2023	239.2023	4
16	WEST	-4.00	.00	.0	4.0	203.3385	203.3385	7
17	WEST	-5.00	.00	.0	4.0	171.7296	171.7296	9

HOUR	THETA (DEG)	SPEED (M/S)	MIXING HEIGHT(M)	TEMP (K)	STABILITY CLASS
40	90.00	2.50	300.00	298.00	5

FINAL HT (M) 62.88

DIST FIN HT (KM) .146

0 RECEPTOR NO.	NAME	EAST COORD	NORTH COORD	RECEPTOR HT ABV GRD (M)	RECEPTOR GRD-LVL ELEV (USER HT UNITS)	TOTAL FROM SIGNIF POINT SOURCES	TOTAL FROM ALL SOURCES	CONCENTRATION RANK
1	WEST	-.10	.00	.0	4.0	54.2619	54.2619	16
2	WEST	-.20	.00	.0	4.0	39.7123	39.7123	17
3	WEST	-.30	.00	.0	4.0	56.0141	56.0141	15
4	WEST	-.40	.00	.0	4.0	75.1668	75.1668	14
5	WEST	-.50	.00	.0	4.0	97.6111	97.6111	13
6	WEST	-.60	.00	.0	4.0	122.1032	122.1032	12
7	WEST	-.70	.00	.0	4.0	147.2338	147.2338	11
8	WEST	-.80	.00	.0	4.0	171.6934	171.6934	9
9	WEST	-.90	.00	.0	4.0	194.4404	194.4404	7
10	WEST	-1.00	.00	.0	4.0	214.7630	214.7630	6
11	WEST	-1.20	.00	.0	4.0	235.8237	235.8237	4
12	WEST	-1.50	.00	.0	4.0	252.3882	252.3882	2
13	WEST	-2.00	.00	.0	4.0	253.8842	253.8842	1
14	WEST	-2.50	.00	.0	4.0	236.9407	236.9407	3
15	WEST	-3.00	.00	.0	4.0	216.9910	216.9910	5
16	WEST	-4.00	.00	.0	4.0	179.3835	179.3835	8
17	WEST	-5.00	.00	.0	4.0	149.0296	149.0296	10

HOUR	THETA (DEG)	SPEED (M/S)	MIXING HEIGHT(M)	TEMP (K)	STABILITY CLASS
41	90.00	3.00	300.00	298.00	5

FINAL HT (M) 59.40

DIST FIN HT (KM) .176

0 RECEPTOR NO.	NAME	EAST COORD	NORTH COORD	RECEPTOR HT ABV GRD (M)	RECEPTOR GRD-LVL ELEV (USER HT UNITS)	TOTAL FROM SIGNIF POINT SOURCES	TOTAL FROM ALL SOURCES	CONCENTRATION RANK
1	WEST	-.10	.00	.0	4.0	72.9560	72.9560	15
2	WEST	-.20	.00	.0	4.0	39.4691	39.4691	17
3	WEST	-.30	.00	.0	4.0	57.2946	57.2946	16
4	WEST	-.40	.00	.0	4.0	78.1779	78.1779	14
5	WEST	-.50	.00	.0	4.0	102.3157	102.3157	13
6	WEST	-.60	.00	.0	4.0	128.0895	128.0895	12
7	WEST	-.70	.00	.0	4.0	153.8175	153.8175	10
8	WEST	-.80	.00	.0	4.0	178.0743	178.0743	8
9	WEST	-.90	.00	.0	4.0	199.8453	199.8453	6
10	WEST	-1.00	.00	.0	4.0	218.5419	218.5419	5
11	WEST	-1.20	.00	.0	4.0	235.9177	235.9177	3
12	WEST	-1.50	.00	.0	4.0	246.7029	246.7029	1
13	WEST	-2.00	.00	.0	4.0	240.6610	240.6610	2
14	WEST	-2.50	.00	.0	4.0	220.0423	220.0423	4
15	WEST	-3.00	.00	.0	4.0	198.4367	198.4367	7
16	WEST	-4.00	.00	.0	4.0	160.5941	160.5941	9
17	WEST	-5.00	.00	.0	4.0	131.7843	131.7843	11

HOUR	THETA (DEG)	SPEED (M/S)	MIXING HEIGHT(M)	TEMP (K)	STABILITY CLASS
42	90.00	4.00	300.00	298.00	5

FINAL HT (M) 54.34

DIST FIN HT (KM) .234

0 RECEPTOR NO.	NAME	EAST COORD	NORTH COORD	RECEPTOR HT ABV GRD (M)	RECEPTOR GRD-LVL ELEV (USER HT UNITS)	TOTAL FROM SIGNIF POINT SOURCES	TOTAL FROM ALL SOURCES	CONCENTRATION RANK
1	WEST	-.10	.00	.0	4.0	126.3884	126.3884	12
2	WEST	-.20	.00	.0	4.0	55.1668	55.1668	17
3	WEST	-.30	.00	.0	4.0	60.0338	60.0338	16
4	WEST	-.40	.00	.0	4.0	83.8070	83.8070	15
5	WEST	-.50	.00	.0	4.0	110.4570	110.4570	13
6	WEST	-.60	.00	.0	4.0	137.6929	137.6929	10
7	WEST	-.70	.00	.0	4.0	163.4715	163.4715	9
8	WEST	-.80	.00	.0	4.0	186.3456	186.3456	7
9	WEST	-.90	.00	.0	4.0	205.5198	205.5198	5
10	WEST	-1.00	.00	.0	4.0	220.7409	220.7409	3
11	WEST	-1.20	.00	.0	4.0	231.4583	231.4583	2
12	WEST	-1.50	.00	.0	4.0	233.0960	233.0960	1
13	WEST	-2.00	.00	.0	4.0	216.8179	216.8179	4
14	WEST	-2.50	.00	.0	4.0	192.2478	192.2478	6
15	WEST	-3.00	.00	.0	4.0	169.4970	169.4970	8
16	WEST	-4.00	.00	.0	4.0	133.0327	133.0327	11
17	WEST	-5.00	.00	.0	4.0	107.2726	107.2726	14

HOUR	THETA (DEG)	SPEED (M/S)	MIXING HEIGHT(M)	TEMP (K)	STABILITY CLASS
43	90.00	5.00	300.00	298.00	5

FINAL HT (M) 50.73

DIST FIN HT (KM) .293

0 RECEPTOR NO.	NAME	EAST COORD	NORTH COORD	RECEPTOR HT ABV GRD (M) (USER HT UNITS)	RECEPTOR GRD-LVL ELEV (USER HT UNITS)	TOTAL FROM SIGNIF POINT SOURCES	TOTAL FROM ALL SOURCES	CONCENTRATION RANK
1	WEST	-.10	.00	.0	4.0	210.3940	210.3940	4
2	WEST	-.20	.00	.0	4.0	94.4151	94.4151	14
3	WEST	-.30	.00	.0	4.0	62.7861	62.7861	17
4	WEST	-.40	.00	.0	4.0	88.8514	88.8514	16
5	WEST	-.50	.00	.0	4.0	117.1410	117.1410	12
6	WEST	-.60	.00	.0	4.0	144.8349	144.8349	11
7	WEST	-.70	.00	.0	4.0	169.7506	169.7506	9
8	WEST	-.80	.00	.0	4.0	190.6142	190.6142	7
9	WEST	-.90	.00	.0	4.0	206.9615	206.9615	5
10	WEST	-1.00	.00	.0	4.0	218.8954	218.8954	3
11	WEST	-1.20	.00	.0	4.0	224.1405	224.1405	1
12	WEST	-1.50	.00	.0	4.0	219.1992	219.1992	2
13	WEST	-2.00	.00	.0	4.0	196.7799	196.7799	6
14	WEST	-2.50	.00	.0	4.0	170.6562	170.6562	8
15	WEST	-3.00	.00	.0	4.0	148.0717	148.0717	10
16	WEST	-4.00	.00	.0	4.0	113.7639	113.7639	13
17	WEST	-5.00	.00	.0	4.0	90.6401	90.6401	15

HOUR	THETA (DEG)	SPEED (M/S)	MIXING HEIGHT(M)	TEMP (K)	STABILITY CLASS
44	90.00	1.00	300.00	298.00	6

FINAL HT (M) 67.11

DIST FIN HT (KM) .000

0 RECEPTOR NO.	NAME	EAST COORD	NORTH COORD	RECEPTOR HT ABV GRD (M) (USER HT UNITS)	RECEPTOR GRD-LVL ELEV (USER HT UNITS)	TOTAL FROM SIGNIF POINT SOURCES	TOTAL FROM ALL SOURCES	CONCENTRATION RANK
1	WEST	-.10	.00	.0	4.0	41.4524	41.4524	17
2	WEST	-.20	.00	.0	4.0	46.9037	46.9037	16
3	WEST	-.30	.00	.0	4.0	54.0649	54.0649	15
4	WEST	-.40	.00	.0	4.0	63.1177	63.1177	14
5	WEST	-.50	.00	.0	4.0	74.1281	74.1281	13
6	WEST	-.60	.00	.0	4.0	87.1105	87.1105	12
7	WEST	-.70	.00	.0	4.0	101.9895	101.9895	11
8	WEST	-.80	.00	.0	4.0	115.0380	115.0380	10
9	WEST	-.90	.00	.0	4.0	128.6910	128.6910	9
10	WEST	-1.00	.00	.0	4.0	142.7708	142.7708	8
11	WEST	-1.20	.00	.0	4.0	167.3263	167.3263	7
12	WEST	-1.50	.00	.0	4.0	202.2326	202.2326	6
13	WEST	-2.00	.00	.0	4.0	250.8315	250.8315	5
14	WEST	-2.50	.00	.0	4.0	273.3589	273.3589	3
15	WEST	-3.00	.00	.0	4.0	285.9166	285.9166	1
16	WEST	-4.00	.00	.0	4.0	281.0034	281.0034	2
17	WEST	-5.00	.00	.0	4.0	267.9611	267.9611	4

HOUR	THETA (DEG)	SPEED (M/S)	MIXING HEIGHT(M)	TEMP (K)	STABILITY CLASS
45	90.00	1.50	300.00	298.00	6

FINAL HT (M) 67.11

DIST FIN HT (KM) .000

0	RECEPTOR NO.	NAME	EAST COORD	NORTH COORD	RECEPTOR HT ABV GRD (M)	RECEPTOR GRD-LVL ELEV (USER HT UNITS)	TOTAL FROM SIGNIF POINT SOURCES	TOTAL FROM ALL SOURCES	CONCENTRATION RANK
	1	WEST	-.10	.00	.0	4.0	41.4524	41.4524	17
	2	WEST	-.20	.00	.0	4.0	46.9037	46.9037	16
	3	WEST	-.30	.00	.0	4.0	54.0649	54.0649	15
	4	WEST	-.40	.00	.0	4.0	63.1177	63.1177	14
	5	WEST	-.50	.00	.0	4.0	74.1281	74.1281	13
	6	WEST	-.60	.00	.0	4.0	87.1105	87.1105	12
	7	WEST	-.70	.00	.0	4.0	101.9895	101.9895	11
	8	WEST	-.80	.00	.0	4.0	115.0380	115.0380	10
	9	WEST	-.90	.00	.0	4.0	128.6910	128.6910	9
	10	WEST	-1.00	.00	.0	4.0	142.7708	142.7708	8
	11	WEST	-1.20	.00	.0	4.0	167.3263	167.3263	7
	12	WEST	-1.50	.00	.0	4.0	202.2326	202.2326	6
	13	WEST	-2.00	.00	.0	4.0	250.8315	250.8315	5
	14	WEST	-2.50	.00	.0	4.0	273.3589	273.3589	3
	15	WEST	-3.00	.00	.0	4.0	285.9166	285.9166	1
	16	WEST	-4.00	.00	.0	4.0	281.0034	281.0034	2
	17	WEST	-5.00	.00	.0	4.0	267.9611	267.9611	4

HOUR	THETA (DEG)	SPEED (M/S)	MIXING HEIGHT(M)	TEMP (K)	STABILITY CLASS
46	90.00	2.00	300.00	298.00	6

FINAL HT (M) 63.25

DIST FIN HT (KM) .000

0	RECEPTOR NO.	NAME	EAST COORD	NORTH COORD	RECEPTOR HT ABV GRD (M)	RECEPTOR GRD-LVL ELEV (USER HT UNITS)	TOTAL FROM SIGNIF POINT SOURCES	TOTAL FROM ALL SOURCES	CONCENTRATION RANK
	1	WEST	-.10	.00	.0	4.0	39.2660	39.2660	17
	2	WEST	-.20	.00	.0	4.0	45.1298	45.1298	16
	3	WEST	-.30	.00	.0	4.0	52.9052	52.9052	15
	4	WEST	-.40	.00	.0	4.0	62.8090	62.8090	14
	5	WEST	-.50	.00	.0	4.0	74.9051	74.9051	13
	6	WEST	-.60	.00	.0	4.0	89.1731	89.1731	12
	7	WEST	-.70	.00	.0	4.0	105.4734	105.4734	11
	8	WEST	-.80	.00	.0	4.0	119.6961	119.6961	10
	9	WEST	-.90	.00	.0	4.0	134.4545	134.4545	9
	10	WEST	-1.00	.00	.0	4.0	149.5202	149.5202	8
	11	WEST	-1.20	.00	.0	4.0	175.3170	175.3170	7
	12	WEST	-1.50	.00	.0	4.0	210.7667	210.7667	6
	13	WEST	-2.00	.00	.0	4.0	257.0986	257.0986	4
	14	WEST	-2.50	.00	.0	4.0	275.5879	275.5879	2
	15	WEST	-3.00	.00	.0	4.0	283.7672	283.7672	1
	16	WEST	-4.00	.00	.0	4.0	272.5818	272.5818	3
	17	WEST	-5.00	.00	.0	4.0	255.2820	255.2820	5

HOUR	THETA (DEG)	SPEED (M/S)	MIXING HEIGHT(M)	TEMP (K)	STABILITY CLASS
47	90.00	2.50	300.00	298.00	6

FINAL HT (M) 59.01

DIST FIN HT (KM) .000

0

RECEPTOR NO.	NAME	EAST COORD	NORTH COORD	RECEPTOR HT ABV GRD (M)	RECEPTOR GRD-LVL ELEV (USER HT UNITS)	TOTAL FROM SIGNIF POINT SOURCES	TOTAL FROM ALL SOURCES	CONCENTRATION RANK
1	WEST	-.10	.00	.0	4.0	36.8898	36.8898	17
2	WEST	-.20	.00	.0	4.0	43.2896	43.2896	16
3	WEST	-.30	.00	.0	4.0	51.8758	51.8758	15
4	WEST	-.40	.00	.0	4.0	62.9064	62.9064	14
5	WEST	-.50	.00	.0	4.0	76.4278	76.4278	13
6	WEST	-.60	.00	.0	4.0	92.3516	92.3516	12
7	WEST	-.70	.00	.0	4.0	110.4262	110.4262	11
8	WEST	-.80	.00	.0	4.0	126.0463	126.0463	10
9	WEST	-.90	.00	.0	4.0	142.0482	142.0482	9
10	WEST	-1.00	.00	.0	4.0	158.1375	158.1375	8
11	WEST	-1.20	.00	.0	4.0	184.9475	184.9475	7
12	WEST	-1.50	.00	.0	4.0	220.0649	220.0649	6
13	WEST	-2.00	.00	.0	4.0	262.0101	262.0101	3
14	WEST	-2.50	.00	.0	4.0	274.8265	274.8265	2
15	WEST	-3.00	.00	.0	4.0	277.4972	277.4972	1
16	WEST	-4.00	.00	.0	4.0	259.3265	259.3265	4
17	WEST	-5.00	.00	.0	4.0	237.8107	237.8107	5

HOUR	THETA (DEG)	SPEED (M/S)	MIXING HEIGHT(M)	TEMP (K)	STABILITY CLASS
48	90.00	3.00	300.00	298.00	6

FINAL HT (M) 55.76

DIST FIN HT (KM) .000

0

RECEPTOR NO.	NAME	EAST COORD	NORTH COORD	RECEPTOR HT ABV GRD (M)	RECEPTOR GRD-LVL ELEV (USER HT UNITS)	TOTAL FROM SIGNIF POINT SOURCES	TOTAL FROM ALL SOURCES	CONCENTRATION RANK
1	WEST	-.10	.00	.0	4.0	35.1030	35.1030	17
2	WEST	-.20	.00	.0	4.0	41.9855	41.9855	16
3	WEST	-.30	.00	.0	4.0	51.3124	51.3124	15
4	WEST	-.40	.00	.0	4.0	63.3727	63.3727	14
5	WEST	-.50	.00	.0	4.0	78.1798	78.1798	13
6	WEST	-.60	.00	.0	4.0	95.5591	95.5591	12
7	WEST	-.70	.00	.0	4.0	115.1316	115.1316	11
8	WEST	-.80	.00	.0	4.0	131.8585	131.8585	10
9	WEST	-.90	.00	.0	4.0	148.7683	148.7683	9
10	WEST	-1.00	.00	.0	4.0	165.5146	165.5146	8
11	WEST	-1.20	.00	.0	4.0	192.6669	192.6669	7
12	WEST	-1.50	.00	.0	4.0	226.6090	226.6090	5
13	WEST	-2.00	.00	.0	4.0	263.6439	263.6439	3
14	WEST	-2.50	.00	.0	4.0	271.3187	271.3187	1
15	WEST	-3.00	.00	.0	4.0	269.4599	269.4599	2
16	WEST	-4.00	.00	.0	4.0	246.2138	246.2138	4
17	WEST	-5.00	.00	.0	4.0	222.0333	222.0333	6

Appendix C

MPTER PRINTOUTS FOR TESTING

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1                MPTER  (VERSION 81350)
                 AN AIR QUALITY DISPERSION MODEL IN
                 SECTION 2. NON-GUIDELINE MODELS.
                 IN UNAMAP (VERSION 5) DEC 82
                 SOURCE: FILE 13 ON UNAMAP MAGNETIC TAPE FROM NTIS.
0                MPTER - VERSION 81350
                 IBM PC VERSION 3.00 COPYRIGHT 1983 JAMES C. CLARY, JR

 MPTER RUN FOR MIDPAC GEOTHERMAL FLOW TESTING - H2S


0                        GENERAL INPUT INFORMATION

  THIS RUN OF MPTER-VERSION 81350 IS FOR THE POLLUTANT SO2  FOR   50   1-HOUR PERIODS.
  CONCENTRATION ESTIMATES BEGIN ON HOUR- 1, JULIAN DAY-  1, YEAR-1989.
  A FACTOR OF      1.0000000 HAS BEEN SPECIFIED TO CONVERT USER LENGTH UNITS TO KILOMETERS.
   1 SIGNIFICANT SOURCES ARE TO BE CONSIDERED.
 THIS RUN WILL NOT CONSIDER ANY POLLUTANT LOSS.
   A FACTOR OF      1.0000000 HAS BEEN SPECIFIED TO CONVERT USER HEIGHT UNITS TO METERS.
0 OPTION      OPTION LIST                 OPTION SPECIFICATION : 0= IGNORE OPTION
                                                                 1= USE OPTION
                      TECHNICAL OPTIONS
       1      TERRAIN ADJUSTMENTS                                 1
       2      DO NOT INCLUDE STACK DOWNWASH CALCULATIONS           0
       3      DO NOT INCLUDE GRADUAL PLUME RISE CALCULATIONS       0
       4      CALCULATE INITIAL PLUME SIZE                        1
                      INPUT OPTIONS
       5      READ MET DATA FROM CARDS                            1
       6      READ HOURLY EMISSIONS                               0
       7      SPECIFY SIGNIFICANT SOURCES                         0
       8      READ RADIAL DISTANCES TO GENERATE RECEPTORS          0
                      PRINTED OUTPUT OPTIONS
       9      DELETE EMISSIONS WITH HEIGHT TABLE                  1
      10      DELETE MET DATA SUMMARY FOR AVG PERIOD              1
      11      DELETE HOURLY CONTRIBUTIONS                         1
      12      DELETE MET DATA ON HOURLY CONTRIBUTIONS             1
      13      DELETE FINAL PLUME RISE CALC ON HRLY CONTRIBUTIONS   1
      14      DELETE HOURLY SUMMARY                               0
      15      DELETE MET DATA ON HRLY SUMMARY                     0
      16      DELETE FINAL PLUME RISE CALC ON HRLY SUMMARY         0
      17      DELETE AVG-PERIOD CONTRIBUTIONS                     1
      18      DELETE AVERAGING PERIOD SUMMARY                     1
      19      DELETE AVG CONCENTRATIONS AND HI-5 TABLES            1
                      OTHER CONTROL AND OUTPUT OPTIONS
      20      RUN IS PART OF A SEGMENTED RUN                      0
      21      WRITE PARTIAL CONC TO DISK OR TAPE                  0
      22      WRITE HOURLY CONC TO DISK OR TAPE                   0
      23      WRITE AVG-PERIOD CONC TO DISK OR TAPE               0
      24      PUNCH AVG-PERIOD CONC ONTO CARDS                    0
 ANEMOMETER HEIGHT IS:     10.00
 EXPONENTS FOR POWER- LAW WIND INCREASE WITH HEIGHT ARE: .07, .07, .10, .15, .35, .55
 TERRAIN ADJUSTMENTS ARE:  .500, .500, .500, .500, .000, .000
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1 POINT SOURCE INFORMATION

SOURCE	EAST COORD (USER UNITS)	NORTH COORD (USER UNITS)	SO2(G/SEC) EMISSIONS	PART(G/SEC) EMISSIONS	STACK HT(M)	STACK TEMP(K)	STACK DIAM(M)	STACK VEL(M/SEC)	POTEN. IMPACT (MICRO G/M**3)	EFF HT(M) USER UNITS	GRD-LVL ELEV USER HT UNITS	BUOY FLUX F M**4/S**3
1 FLOW TEST	.00	.00	1.07	.00	2.0	373.0	4.0	1.7	16.94	54.06	.00	14.13

0 SIGNIFICANT SO2 POINT SOURCES

RANK	CHI-MAX (MICROGRAMS/M**3)	SOURCE NO.
1	16.94	1

0 ADDITIONAL INFORMATION ON SOURCES.
0 EMISSION INFORMATION FOR 1 (NPT) POINT SOURCES HAS BEEN INPUT
1 SIGNIFICANT POINT SOURCES(NSIGP) ARE TO BE USED FOR THIS RUN
THE ORDER OF SIGNIFICANCE(IMPS) FOR 25 OR LESS POINT SOURCES USED IN THIS RUN AS LISTED BY POINT SOURCE NUMBER:
1

0 RECEPTOR INFORMATION

0 RECEPTOR	IDENTIFICATION	EAST COORD (USER UNITS)	NORTH COORD (USER UNITS)	RECEPTOR HT ABV LOCAL GRD LVL (METERS)	RECEPTOR GROUND LEVEL ELEVATION (USER HT UNITS)
1	WEST	-.100	.000	.0	2.0
2	WEST	-.200	.000	.0	2.0
3	WEST	-.300	.000	.0	2.0
4	WEST	-.400	.000	.0	2.0
5	WEST	-.500	.000	.0	2.0
6	WEST	-.600	.000	.0	2.0
7	WEST	-.700	.000	.0	2.0
8	WEST	-.800	.000	.0	2.0
9	WEST	-.900	.000	.0	2.0
10	WEST	-1.000	.000	.0	2.0
11	WEST	-1.200	.000	.0	2.0
12	WEST	-1.500	.000	.0	2.0
13	WEST	-2.000	.000	.0	2.0
14	WEST	-2.500	.000	.0	2.0
15	WEST	-3.000	.000	.0	2.0
16	WEST	-4.000	.000	.0	2.0
17	WEST	-5.000	.000	.0	2.0

0 * ONE ASTERISK INDICATES THAT THE ASSOCIATED RECEPTOR(S) HAVE A GROUND LEVEL ELEVATION LOWER THAN THE LOWEST SOURCE BASE ELEVATIO

CAUTION SHOULD BE USED IN INTERPRETING CONCENTRATIONS FOR THESE RECEPTORS.
** TWO ASTERISKS INDICATE THAT THE ASSOCIATED RECEPTOR(S) HAVE GROUND LEVEL ELEVATIONS ABOVE THE LOWEST STACK TOP.
CONSEQUENTLY NO CALCULATIONS WILL BE PERFORMED WITH THIS RECEPTOR.A SERIES OF ASTERISKS WILL INSTEAD APPEAR IN THE OUTPUT.

HOUR	THETA (DEG)	SPEED (M/S)	MIXING HEIGHT(M)	TEMP (K)	STABILITY CLASS
1	90.00	1.00	300.00	298.00	1

FINAL HT (M) 150.79

DIST FIN HT (KM) .246

0	RECEPTOR NO.	NAME	EAST COORD	NORTH COORD	RECEPTOR HT ABV GRD (M)	RECEPTOR GRD-LVL ELEV (USER HT UNITS)	TOTAL FROM SIGNIF POINT	TOTAL FROM ALL SOURCES	CONCENTRATION RANK
	1	WEST	-.10	.00	.0	2.0	3.4744	3.4744	12
	2	WEST	-.20	.00	.0	2.0	2.5403	2.5403	15
	3	WEST	-.30	.00	.0	2.0	4.0383	4.0383	10
	4	WEST	-.40	.00	.0	2.0	7.8716	7.8716	5
	5	WEST	-.50	.00	.0	2.0	10.3722	10.3722	1
	6	WEST	-.60	.00	.0	2.0	10.1341	10.1341	2
	7	WEST	-.70	.00	.0	2.0	9.0005	9.0005	3
	8	WEST	-.80	.00	.0	2.0	8.0579	8.0579	4
	9	WEST	-.90	.00	.0	2.0	7.3014	7.3014	6
	10	WEST	-1.00	.00	.0	2.0	6.6804	6.6804	7
	11	WEST	-1.20	.00	.0	2.0	5.7208	5.7208	8
	12	WEST	-1.50	.00	.0	2.0	4.7246	4.7246	9
	13	WEST	-2.00	.00	.0	2.0	3.6866	3.6866	11
	14	WEST	-2.50	.00	.0	2.0	3.0398	3.0398	13
	15	WEST	-3.00	.00	.0	2.0	2.5964	2.5964	14
	16	WEST	-4.00	.00	.0	2.0	2.0251	2.0251	16
	17	WEST	-5.00	.00	.0	2.0	1.6708	1.6708	17

HOUR	THETA (DEG)	SPEED (M/S)	MIXING HEIGHT(M)	TEMP (K)	STABILITY CLASS
2	90.00	1.50	300.00	298.00	1

FINAL HT (M) 111.05

DIST FIN HT (KM) .246

0	RECEPTOR NO.	NAME	EAST COORD	NORTH COORD	RECEPTOR HT ABV GRD (M)	RECEPTOR GRD-LVL ELEV (USER HT UNITS)	TOTAL FROM SIGNIF POINT SOURCES	TOTAL FROM ALL SOURCES	CONCENTRATION RANK
	1	WEST	-.10	.00	.0	2.0	9.6568	9.6568	3
	2	WEST	-.20	.00	.0	2.0	6.5772	6.5772	7
	3	WEST	-.30	.00	.0	2.0	8.8411	8.8411	5
	4	WEST	-.40	.00	.0	2.0	12.2753	12.2753	1
	5	WEST	-.50	.00	.0	2.0	11.9300	11.9300	2
	6	WEST	-.60	.00	.0	2.0	9.3551	9.3551	4
	7	WEST	-.70	.00	.0	2.0	7.2567	7.2567	6
	8	WEST	-.80	.00	.0	2.0	6.1490	6.1490	8
	9	WEST	-.90	.00	.0	2.0	5.5095	5.5095	9
	10	WEST	-1.00	.00	.0	2.0	5.0293	5.0293	10
	11	WEST	-1.20	.00	.0	2.0	4.2966	4.2966	11
	12	WEST	-1.50	.00	.0	2.0	3.5410	3.5410	12
	13	WEST	-2.00	.00	.0	2.0	2.7582	2.7582	13
	14	WEST	-2.50	.00	.0	2.0	2.2724	2.2724	14
	15	WEST	-3.00	.00	.0	2.0	1.9400	1.9400	15
	16	WEST	-4.00	.00	.0	2.0	1.5123	1.5123	16
	17	WEST	-5.00	.00	.0	2.0	1.2474	1.2474	17

HOUR	THETA (DEG)	SPEED (M/S)	MIXING HEIGHT(M)	TEMP (K)	STABILITY CLASS
3	90.00	2.00	300.00	298.00	1

FINAL HT (M) 83.27

DIST FIN HT (KM) .246

0 RECEPTOR NO.	NAME	EAST COORD	NORTH COORD	RECEPTOR HT ABV GRD (M)	RECEPTOR GRD-LVL ELEV (USER HT UNITS)	TOTAL FROM SIGNIF POINT SOURCES	TOTAL FROM ALL SOURCES	CONCENTRATION RANK
1	WEST	-.10	.00	.0	2.0	21.7517	21.7517	1
2	WEST	-.20	.00	.0	2.0	13.5137	13.5137	4
3	WEST	-.30	.00	.0	2.0	14.2873	14.2873	3
4	WEST	-.40	.00	.0	2.0	14.5495	14.5495	2
5	WEST	-.50	.00	.0	2.0	11.4605	11.4605	5
6	WEST	-.60	.00	.0	2.0	7.9215	7.9215	6
7	WEST	-.70	.00	.0	2.0	5.7033	5.7033	7
8	WEST	-.80	.00	.0	2.0	4.6737	4.6737	8
9	WEST	-.90	.00	.0	2.0	4.1583	4.1583	9
10	WEST	-1.00	.00	.0	2.0	3.7908	3.7908	10
11	WEST	-1.20	.00	.0	2.0	3.2341	3.2341	11
12	WEST	-1.50	.00	.0	2.0	2.6623	2.6623	12
13	WEST	-2.00	.00	.0	2.0	2.0718	2.0718	13
14	WEST	-2.50	.00	.0	2.0	1.7060	1.7060	14
15	WEST	-3.00	.00	.0	2.0	1.4560	1.4560	15
16	WEST	-4.00	.00	.0	2.0	1.1347	1.1347	16
17	WEST	-5.00	.00	.0	2.0	.9358	.9358	17

HOUR	THETA (DEG)	SPEED (M/S)	MIXING HEIGHT(M)	TEMP (K)	STABILITY CLASS
4	90.00	2.50	300.00	298.00	1

FINAL HT (M) 66.62

DIST FIN HT (KM) .246

0 RECEPTOR NO.	NAME	EAST COORD	NORTH COORD	RECEPTOR HT ABV GRD (M)	RECEPTOR GRD-LVL ELEV (USER HT UNITS)	TOTAL FROM SIGNIF POINT SOURCES	TOTAL FROM ALL SOURCES	CONCENTRATION RANK
1	WEST	-.10	.00	.0	2.0	38.0293	38.0293	1
2	WEST	-.20	.00	.0	2.0	20.5471	20.5471	2
3	WEST	-.30	.00	.0	2.0	17.6280	17.6280	3
4	WEST	-.40	.00	.0	2.0	14.7089	14.7089	4
5	WEST	-.50	.00	.0	2.0	10.3390	10.3390	5
6	WEST	-.60	.00	.0	2.0	6.7168	6.7168	6
7	WEST	-.70	.00	.0	2.0	4.6691	4.6691	7
8	WEST	-.80	.00	.0	2.0	3.7633	3.7633	8
9	WEST	-.90	.00	.0	2.0	3.3365	3.3365	9
10	WEST	-1.00	.00	.0	2.0	3.0397	3.0397	10
11	WEST	-1.20	.00	.0	2.0	2.5917	2.5917	11
12	WEST	-1.50	.00	.0	2.0	2.1323	2.1323	12
13	WEST	-2.00	.00	.0	2.0	1.6585	1.6585	13
14	WEST	-2.50	.00	.0	2.0	1.3654	1.3654	14
15	WEST	-3.00	.00	.0	2.0	1.1652	1.1652	15
16	WEST	-4.00	.00	.0	2.0	.9080	.9080	16
17	WEST	-5.00	.00	.0	2.0	.7488	.7488	17

HOUR	THETA (DEG)	SPEED (M/S)	MIXING HEIGHT(M)	TEMP (K)	STABILITY CLASS
5	90.00	3.00	300.00	298.00	1

FINAL HT (M) 55.51

DIST FIN HT (KM) .246

0	RECEPTOR NO.	NAME	EAST COORD	NORTH COORD	RECEPTOR HT ABV GRD (M)	RECEPTOR GRD-LVL ELEV (USER HT UNITS)	TOTAL FROM SIGNIF POINT SOURCES	TOTAL FROM ALL SOURCES	CONCENTRATION RANK
	1	WEST	-.10	.00	.0	2.0	55.1501	55.1501	1
	2	WEST	-.20	.00	.0	2.0	26.0461	26.0461	2
	3	WEST	-.30	.00	.0	2.0	19.0869	19.0869	3
	4	WEST	-.40	.00	.0	2.0	14.0110	14.0110	4
	5	WEST	-.50	.00	.0	2.0	9.2108	9.2108	5
	6	WEST	-.60	.00	.0	2.0	5.7799	5.7799	6
	7	WEST	-.70	.00	.0	2.0	3.9413	3.9413	7
	8	WEST	-.80	.00	.0	2.0	3.1474	3.1474	8
	9	WEST	-.90	.00	.0	2.0	2.7849	2.7849	9
	10	WEST	-1.00	.00	.0	2.0	2.5363	2.5363	10
	11	WEST	-1.20	.00	.0	2.0	2.1617	2.1617	11
	12	WEST	-1.50	.00	.0	2.0	1.7780	1.7780	12
	13	WEST	-2.00	.00	.0	2.0	1.3826	1.3826	13
	14	WEST	-2.50	.00	.0	2.0	1.1382	1.1382	14
	15	WEST	-3.00	.00	.0	2.0	.9712	.9712	15
	16	WEST	-4.00	.00	.0	2.0	.7567	.7567	16
	17	WEST	-5.00	.00	.0	2.0	.6240	.6240	17

HOUR	THETA (DEG)	SPEED (M/S)	MIXING HEIGHT(M)	TEMP (K)	STABILITY CLASS
6	90.00	4.00	300.00	298.00	1

FINAL HT (M) 41.63

DIST FIN HT (KM) .246

0	RECEPTOR NO.	NAME	EAST COORD	NORTH COORD	RECEPTOR HT ABV GRD (M)	RECEPTOR GRD-LVL ELEV (USER HT UNITS)	TOTAL FROM SIGNIF POINT SOURCES	TOTAL FROM ALL SOURCES	CONCENTRATION RANK
	1	WEST	-.10	.00	.0	2.0	82.0519	82.0519	1
	2	WEST	-.20	.00	.0	2.0	31.6044	31.6044	2
	3	WEST	-.30	.00	.0	2.0	18.9682	18.9682	3
	4	WEST	-.40	.00	.0	2.0	12.0588	12.0588	4
	5	WEST	-.50	.00	.0	2.0	7.3896	7.3896	5
	6	WEST	-.60	.00	.0	2.0	4.4767	4.4767	6
	7	WEST	-.70	.00	.0	2.0	2.9948	2.9948	7
	8	WEST	-.80	.00	.0	2.0	2.3692	2.3692	8
	9	WEST	-.90	.00	.0	2.0	2.0921	2.0921	9
	10	WEST	-1.00	.00	.0	2.0	1.9046	1.9046	10
	11	WEST	-1.20	.00	.0	2.0	1.6228	1.6228	11
	12	WEST	-1.50	.00	.0	2.0	1.3343	1.3343	12
	13	WEST	-2.00	.00	.0	2.0	1.0374	1.0374	13
	14	WEST	-2.50	.00	.0	2.0	.8538	.8538	14
	15	WEST	-3.00	.00	.0	2.0	.7285	.7285	15
	16	WEST	-4.00	.00	.0	2.0	.5676	.5676	16
	17	WEST	-5.00	.00	.0	2.0	.4681	.4681	17

HOUR	THETA (DEG)	SPEED (M/S)	MIXING HEIGHT(M)	TEMP (K)	STABILITY CLASS
7	90.00	1.00	300.00	298.00	2

FINAL HT (M) 150.79

DIST FIN HT (KM) .246

0

RECEPTOR NO.	NAME	EAST COORD	NORTH COORD	RECEPTOR HT ABV GRD (M)	RECEPTOR GRD-LVL ELEV (USER HT UNITS)	TOTAL FROM SIGNIF POINT SOURCES	TOTAL FROM ALL SOURCES	CONCENTRATION RANK
1	WEST	-.10	.00	.0	2.0	2.4280	2.4280	14
2	WEST	-.20	.00	.0	2.0	1.3005	1.3005	17
3	WEST	-.30	.00	.0	2.0	1.5601	1.5601	16
4	WEST	-.40	.00	.0	2.0	2.7121	2.7121	12
5	WEST	-.50	.00	.0	2.0	4.3460	4.3460	9
6	WEST	-.60	.00	.0	2.0	5.9281	5.9281	7
7	WEST	-.70	.00	.0	2.0	7.1266	7.1266	5
8	WEST	-.80	.00	.0	2.0	7.8320	7.8320	3
9	WEST	-.90	.00	.0	2.0	8.0989	8.0989	1
10	WEST	-1.00	.00	.0	2.0	8.0464	8.0464	2
11	WEST	-1.20	.00	.0	2.0	7.4428	7.4428	4
12	WEST	-1.50	.00	.0	2.0	6.3047	6.3047	6
13	WEST	-2.00	.00	.0	2.0	4.9254	4.9254	8
14	WEST	-2.50	.00	.0	2.0	4.0553	4.0553	10
15	WEST	-3.00	.00	.0	2.0	3.4585	3.4585	11
16	WEST	-4.00	.00	.0	2.0	2.6897	2.6897	13
17	WEST	-5.00	.00	.0	2.0	2.2134	2.2134	15

HOUR	THETA (DEG)	SPEED (M/S)	MIXING HEIGHT(M)	TEMP (K)	STABILITY CLASS
8	90.00	1.50	300.00	298.00	2

FINAL HT (M) 111.05

DIST FIN HT (KM) .246

0

RECEPTOR NO.	NAME	EAST COORD	NORTH COORD	RECEPTOR HT ABV GRD (M)	RECEPTOR GRD-LVL ELEV (USER HT UNITS)	TOTAL FROM SIGNIF POINT SOURCES	TOTAL FROM ALL SOURCES	CONCENTRATION RANK
1	WEST	-.10	.00	.0	2.0	6.3732	6.3732	9
2	WEST	-.20	.00	.0	2.0	3.2879	3.2879	13
3	WEST	-.30	.00	.0	2.0	4.0236	4.0236	11
4	WEST	-.40	.00	.0	2.0	6.5207	6.5207	8
5	WEST	-.50	.00	.0	2.0	8.9366	8.9366	5
6	WEST	-.60	.00	.0	2.0	10.2907	10.2907	3
7	WEST	-.70	.00	.0	2.0	10.6465	10.6465	1
8	WEST	-.80	.00	.0	2.0	10.3415	10.3415	2
9	WEST	-.90	.00	.0	2.0	9.6875	9.6875	4
10	WEST	-1.00	.00	.0	2.0	8.8928	8.8928	6
11	WEST	-1.20	.00	.0	2.0	7.3090	7.3090	7
12	WEST	-1.50	.00	.0	2.0	5.4815	5.4815	10
13	WEST	-2.00	.00	.0	2.0	3.8339	3.8339	12
14	WEST	-2.50	.00	.0	2.0	3.0533	3.0533	14
15	WEST	-3.00	.00	.0	2.0	2.5881	2.5881	15
16	WEST	-4.00	.00	.0	2.0	2.0098	2.0098	16
17	WEST	-5.00	.00	.0	2.0	1.6531	1.6531	17

HOUR	THETA (DEG)	SPEED (M/S)	MIXING HEIGHT(M)	TEMP (K)	STABILITY CLASS
9	90.00	2.00	300.00	298.00	2

FINAL HT (M) 83.27

DIST FIN HT (KM) .246

0 RECEPTOR NO.	NAME	EAST COORD	NORTH COORD	RECEPTOR HT ABV GRD (M)	RECEPTOR GRD-LVL ELEV (USER HT UNITS)	TOTAL FROM SIGNIF POINT SOURCES	TOTAL FROM ALL SOURCES	CONCENTRATION RANK
1	WEST	-.10	.00	.0	2.0	14.3189	14.3189	1
2	WEST	-.20	.00	.0	2.0	7.5047	7.5047	10
3	WEST	-.30	.00	.0	2.0	8.7197	8.7197	8
4	WEST	-.40	.00	.0	2.0	11.9666	11.9666	5
5	WEST	-.50	.00	.0	2.0	13.5350	13.5350	2
6	WEST	-.60	.00	.0	2.0	13.3170	13.3170	3
7	WEST	-.70	.00	.0	2.0	12.2334	12.2334	4
8	WEST	-.80	.00	.0	2.0	10.8804	10.8804	6
9	WEST	-.90	.00	.0	2.0	9.5446	9.5446	7
10	WEST	-1.00	.00	.0	2.0	8.3376	8.3376	9
11	WEST	-1.20	.00	.0	2.0	6.3972	6.3972	11
12	WEST	-1.50	.00	.0	2.0	4.4929	4.4929	12
13	WEST	-2.00	.00	.0	2.0	2.9516	2.9516	13
14	WEST	-2.50	.00	.0	2.0	2.3025	2.3025	14
15	WEST	-3.00	.00	.0	2.0	1.9443	1.9443	15
16	WEST	-4.00	.00	.0	2.0	1.5086	1.5086	16
17	WEST	-5.00	.00	.0	2.0	1.2405	1.2405	17

HOUR	THETA (DEG)	SPEED (M/S)	MIXING HEIGHT(M)	TEMP (K)	STABILITY CLASS
10	90.00	2.50	300.00	298.00	2

FINAL HT (M) 66.62

DIST FIN HT (KM) .246

0 RECEPTOR NO.	NAME	EAST COORD	NORTH COORD	RECEPTOR HT ABV GRD (M)	RECEPTOR GRD-LVL ELEV (USER HT UNITS)	TOTAL FROM SIGNIF POINT SOURCES	TOTAL FROM ALL SOURCES	CONCENTRATION RANK
1	WEST	-.10	.00	.0	2.0	27.0596	27.0596	1
2	WEST	-.20	.00	.0	2.0	13.6558	13.6558	6
3	WEST	-.30	.00	.0	2.0	14.1504	14.1504	5
4	WEST	-.40	.00	.0	2.0	16.3449	16.3449	2
5	WEST	-.50	.00	.0	2.0	15.9655	15.9655	3
6	WEST	-.60	.00	.0	2.0	14.1889	14.1889	4
7	WEST	-.70	.00	.0	2.0	12.1562	12.1562	7
8	WEST	-.80	.00	.0	2.0	10.2986	10.2986	8
9	WEST	-.90	.00	.0	2.0	8.7256	8.7256	9
10	WEST	-1.00	.00	.0	2.0	7.4306	7.4306	10
11	WEST	-1.20	.00	.0	2.0	5.5102	5.5102	11
12	WEST	-1.50	.00	.0	2.0	3.7521	3.7521	12
13	WEST	-2.00	.00	.0	2.0	2.3923	2.3923	13
14	WEST	-2.50	.00	.0	2.0	1.8471	1.8471	14
15	WEST	-3.00	.00	.0	2.0	1.5566	1.5566	15
16	WEST	-4.00	.00	.0	2.0	1.2073	1.2073	16
17	WEST	-5.00	.00	.0	2.0	.9927	.9927	17

HOUR	THETA (DEG)	SPEED (M/S)	MIXING HEIGHT(M)	TEMP (K)	STABILITY CLASS
11	90.00	3.00	300.00	298.00	2

FINAL HT (M) 55.51

DIST FIN HT (KM) .246

0 RECEPTOR NO.	NAME	EAST COORD	NORTH COORD	RECEPTOR HT ABV GRD (M)	RECEPTOR GRD-LVL ELEV (USER HT UNITS)	TOTAL FROM SIGNIF POINT SOURCES	TOTAL FROM ALL SOURCES	CONCENTRATION RANK
1	WEST	-.10	.00	.0	2.0	43.8152	43.8152	1
2	WEST	-.20	.00	.0	2.0	20.7501	20.7501	2
3	WEST	-.30	.00	.0	2.0	18.9995	18.9995	4
4	WEST	-.40	.00	.0	2.0	19.0401	19.0401	3
5	WEST	-.50	.00	.0	2.0	16.7737	16.7737	5
6	WEST	-.60	.00	.0	2.0	13.9613	13.9613	6
7	WEST	-.70	.00	.0	2.0	11.4613	11.4613	7
8	WEST	-.80	.00	.0	2.0	9.4339	9.4339	8
9	WEST	-.90	.00	.0	2.0	7.8334	7.8334	9
10	WEST	-1.00	.00	.0	2.0	6.5743	6.5743	10
11	WEST	-1.20	.00	.0	2.0	4.7828	4.7828	11
12	WEST	-1.50	.00	.0	2.0	3.2020	3.2020	12
13	WEST	-2.00	.00	.0	2.0	2.0082	2.0082	13
14	WEST	-2.50	.00	.0	2.0	1.5416	1.5416	14
15	WEST	-3.00	.00	.0	2.0	1.2977	1.2977	15
16	WEST	-4.00	.00	.0	2.0	1.0063	1.0063	16
17	WEST	-5.00	.00	.0	2.0	.8273	.8273	17

HOUR	THETA (DEG)	SPEED (M/S)	MIXING HEIGHT(M)	TEMP (K)	STABILITY CLASS
12	90.00	4.00	300.00	298.00	2

FINAL HT (M) 41.63

DIST FIN HT (KM) .246

0 RECEPTOR NO.	NAME	EAST COORD	NORTH COORD	RECEPTOR HT ABV GRD (M)	RECEPTOR GRD-LVL ELEV (USER HT UNITS)	TOTAL FROM SIGNIF POINT SOURCES	TOTAL FROM ALL SOURCES	CONCENTRATION RANK
1	WEST	-.10	.00	.0	2.0	80.9651	80.9651	1
2	WEST	-.20	.00	.0	2.0	33.5226	33.5226	2
3	WEST	-.30	.00	.0	2.0	25.0250	25.0250	3
4	WEST	-.40	.00	.0	2.0	20.6859	20.6859	4
5	WEST	-.50	.00	.0	2.0	16.0980	16.0980	5
6	WEST	-.60	.00	.0	2.0	12.4478	12.4478	6
7	WEST	-.70	.00	.0	2.0	9.7577	9.7577	7
8	WEST	-.80	.00	.0	2.0	7.7907	7.7907	8
9	WEST	-.90	.00	.0	2.0	6.3347	6.3347	9
10	WEST	-1.00	.00	.0	2.0	5.2374	5.2374	10
11	WEST	-1.20	.00	.0	2.0	3.7367	3.7367	11
12	WEST	-1.50	.00	.0	2.0	2.4595	2.4595	12
13	WEST	-2.00	.00	.0	2.0	1.5175	1.5175	13
14	WEST	-2.50	.00	.0	2.0	1.1580	1.1580	14
15	WEST	-3.00	.00	.0	2.0	.9737	.9737	15
16	WEST	-4.00	.00	.0	2.0	.7549	.7549	16
17	WEST	-5.00	.00	.0	2.0	.6206	.6206	17

HOUR	THETA (DEG)	SPEED (M/S)	MIXING HEIGHT(M)	TEMP (K)	STABILITY CLASS
13	90.00	5.00	300.00	298.00	2

FINAL HT (M) 33.31

DIST FIN HT (KM) .246

0

RECEPTOR NO.	NAME	EAST COORD	NORTH COORD	RECEPTOR HT ABV GRD (M)	RECEPTOR GRD-LVL ELEV (USER HT UNITS)	TOTAL FROM SIGNIF POINT SOURCES	TOTAL FROM ALL SOURCES	CONCENTRATION RANK
1	WEST	-.10	.00	.0	2.0	111.2708	111.2708	1
2	WEST	-.20	.00	.0	2.0	41.4275	41.4275	2
3	WEST	-.30	.00	.0	2.0	26.9613	26.9613	3
4	WEST	-.40	.00	.0	2.0	19.9244	19.9244	4
5	WEST	-.50	.00	.0	2.0	14.5171	14.5171	5
6	WEST	-.60	.00	.0	2.0	10.8156	10.8156	6
7	WEST	-.70	.00	.0	2.0	8.2882	8.2882	7
8	WEST	-.80	.00	.0	2.0	6.5209	6.5209	8
9	WEST	-.90	.00	.0	2.0	5.2494	5.2494	9
10	WEST	-1.00	.00	.0	2.0	4.3094	4.3094	10
11	WEST	-1.20	.00	.0	2.0	3.0466	3.0466	11
12	WEST	-1.50	.00	.0	2.0	1.9896	1.9896	12
13	WEST	-2.00	.00	.0	2.0	1.2182	1.2182	13
14	WEST	-2.50	.00	.0	2.0	.9270	.9270	14
15	WEST	-3.00	.00	.0	2.0	.7791	.7791	15
16	WEST	-4.00	.00	.0	2.0	.6039	.6039	16
17	WEST	-5.00	.00	.0	2.0	.4965	.4965	17

HOUR	THETA (DEG)	SPEED (M/S)	MIXING HEIGHT(M)	TEMP (K)	STABILITY CLASS
14	90.00	2.00	300.00	298.00	3

FINAL HT (M) 87.39

DIST FIN HT (KM) .246

0

RECEPTOR NO.	NAME	EAST COORD	NORTH COORD	RECEPTOR HT ABV GRD (M)	RECEPTOR GRD-LVL ELEV (USER HT UNITS)	TOTAL FROM SIGNIF POINT SOURCES	TOTAL FROM ALL SOURCES	CONCENTRATION RANK
1	WEST	-.10	.00	.0	2.0	7.4609	7.4609	9
2	WEST	-.20	.00	.0	2.0	3.5781	3.5781	15
3	WEST	-.30	.00	.0	2.0	4.0033	4.0033	13
4	WEST	-.40	.00	.0	2.0	6.4027	6.4027	11
5	WEST	-.50	.00	.0	2.0	8.7540	8.7540	8
6	WEST	-.60	.00	.0	2.0	10.5931	10.5931	6
7	WEST	-.70	.00	.0	2.0	11.7588	11.7588	4
8	WEST	-.80	.00	.0	2.0	12.3078	12.3078	2
9	WEST	-.90	.00	.0	2.0	12.3835	12.3835	1
10	WEST	-1.00	.00	.0	2.0	12.1350	12.1350	3
11	WEST	-1.20	.00	.0	2.0	11.1205	11.1205	5
12	WEST	-1.50	.00	.0	2.0	9.2569	9.2569	7
13	WEST	-2.00	.00	.0	2.0	6.6504	6.6504	10
14	WEST	-2.50	.00	.0	2.0	4.8952	4.8952	12
15	WEST	-3.00	.00	.0	2.0	3.7527	3.7527	14
16	WEST	-4.00	.00	.0	2.0	2.5134	2.5134	16
17	WEST	-5.00	.00	.0	2.0	1.9352	1.9352	17

HOUR	THETA (DEG)	SPEED (M/S)	MIXING HEIGHT(M)	TEMP (K)	STABILITY CLASS
15	90.00	2.50	300.00	298.00	3

FINAL HT (M) 69.91

DIST FIN HT (KM) .246

0 RECEPTOR NO.	NAME	EAST COORD	NORTH COORD	RECEPTOR HT ABV GRD (M)	RECEPTOR GRD-LVL ELEV (USER HT UNITS)	TOTAL FROM SIGNIF POINT SOURCES	TOTAL FROM ALL SOURCES	CONCENTRATION RANK
1	WEST	-.10	.00	.0	2.0	13.6960	13.6960	6
2	WEST	-.20	.00	.0	2.0	6.7549	6.7549	12
3	WEST	-.30	.00	.0	2.0	7.6055	7.6055	11
4	WEST	-.40	.00	.0	2.0	11.3654	11.3654	8
5	WEST	-.50	.00	.0	2.0	14.0285	14.0285	5
6	WEST	-.60	.00	.0	2.0	15.3338	15.3338	2
7	WEST	-.70	.00	.0	2.0	15.5695	15.5695	1
8	WEST	-.80	.00	.0	2.0	15.1266	15.1266	3
9	WEST	-.90	.00	.0	2.0	14.3165	14.3165	4
10	WEST	-1.00	.00	.0	2.0	13.3439	13.3439	7
11	WEST	-1.20	.00	.0	2.0	11.3435	11.3435	9
12	WEST	-1.50	.00	.0	2.0	8.7859	8.7859	10
13	WEST	-2.00	.00	.0	2.0	5.9142	5.9142	13
14	WEST	-2.50	.00	.0	2.0	4.2051	4.2051	14
15	WEST	-3.00	.00	.0	2.0	3.1521	3.1521	15
16	WEST	-4.00	.00	.0	2.0	2.0506	2.0506	16
17	WEST	-5.00	.00	.0	2.0	1.5575	1.5575	17

HOUR	THETA (DEG)	SPEED (M/S)	MIXING HEIGHT(M)	TEMP (K)	STABILITY CLASS
16	90.00	3.00	300.00	298.00	3

FINAL HT (M) 58.26

DIST FIN HT (KM) .246

0 RECEPTOR NO.	NAME	EAST COORD	NORTH COORD	RECEPTOR HT ABV GRD (M)	RECEPTOR GRD-LVL ELEV (USER HT UNITS)	TOTAL FROM SIGNIF POINT SOURCES	TOTAL FROM ALL SOURCES	CONCENTRATION RANK
1	WEST	-.10	.00	.0	2.0	23.2376	23.2376	1
2	WEST	-.20	.00	.0	2.0	11.4509	11.4509	10
3	WEST	-.30	.00	.0	2.0	12.3878	12.3878	9
4	WEST	-.40	.00	.0	2.0	16.7118	16.7118	5
5	WEST	-.50	.00	.0	2.0	18.6134	18.6134	3
6	WEST	-.60	.00	.0	2.0	18.6768	18.6768	2
7	WEST	-.70	.00	.0	2.0	17.7269	17.7269	4
8	WEST	-.80	.00	.0	2.0	16.3415	16.3415	6
9	WEST	-.90	.00	.0	2.0	14.8444	14.8444	7
10	WEST	-1.00	.00	.0	2.0	13.3950	13.3950	8
11	WEST	-1.20	.00	.0	2.0	10.8667	10.8667	11
12	WEST	-1.50	.00	.0	2.0	8.0617	8.0617	12
13	WEST	-2.00	.00	.0	2.0	5.2265	5.2265	13
14	WEST	-2.50	.00	.0	2.0	3.6448	3.6448	14
15	WEST	-3.00	.00	.0	2.0	2.6987	2.6987	15
16	WEST	-4.00	.00	.0	2.0	1.7278	1.7278	16
17	WEST	-5.00	.00	.0	2.0	1.3024	1.3024	17

HOUR	THETA (DEG)	SPEED (M/S)	MIXING HEIGHT(M)	TEMP (K)	STABILITY CLASS
17	90.00	4.00	300.00	298.00	3

FINAL HT (M) 43.69

DIST FIN HT (KM) .246

0	RECEPTOR NO.	NAME	EAST COORD	NORTH COORD	RECEPTOR HT ABV GRD (M)	RECEPTOR GRD-LVL ELEV (USER HT UNITS)	TOTAL FROM SIGNIF POINT SOURCES	TOTAL FROM ALL SOURCES	CONCENTRATION RANK
	1	WEST	-.10	.00	.0	2.0	52.8762	52.8762	1
	2	WEST	-.20	.00	.0	2.0	24.5838	24.5838	3
	3	WEST	-.30	.00	.0	2.0	23.1590	23.1590	5
	4	WEST	-.40	.00	.0	2.0	25.4138	25.4138	2
	5	WEST	-.50	.00	.0	2.0	24.0886	24.0886	4
	6	WEST	-.60	.00	.0	2.0	21.4862	21.4862	6
	7	WEST	-.70	.00	.0	2.0	18.7207	18.7207	7
	8	WEST	-.80	.00	.0	2.0	16.2018	16.2018	8
	9	WEST	-.90	.00	.0	2.0	14.0347	14.0347	9
	10	WEST	-1.00	.00	.0	2.0	12.2109	12.2109	10
	11	WEST	-1.20	.00	.0	2.0	9.4114	9.4114	11
	12	WEST	-1.50	.00	.0	2.0	6.6694	6.6694	12
	13	WEST	-2.00	.00	.0	2.0	4.1587	4.1587	13
	14	WEST	-2.50	.00	.0	2.0	2.8436	2.8436	14
	15	WEST	-3.00	.00	.0	2.0	2.0798	2.0798	15
	16	WEST	-4.00	.00	.0	2.0	1.3105	1.3105	16
	17	WEST	-5.00	.00	.0	2.0	.9802	.9802	17

HOUR	THETA (DEG)	SPEED (M/S)	MIXING HEIGHT(M)	TEMP (K)	STABILITY CLASS
18	90.00	5.00	300.00	298.00	3

FINAL HT (M) 34.96

DIST FIN HT (KM) .246

0	RECEPTOR NO.	NAME	EAST COORD	NORTH COORD	RECEPTOR HT ABV GRD (M)	RECEPTOR GRD-LVL ELEV (USER HT UNITS)	TOTAL FROM SIGNIF POINT SOURCES	TOTAL FROM ALL SOURCES	CONCENTRATION RANK
	1	WEST	-.10	.00	.0	2.0	92.1317	92.1317	1
	2	WEST	-.20	.00	.0	2.0	39.3267	39.3267	2
	3	WEST	-.30	.00	.0	2.0	32.1495	32.1495	3
	4	WEST	-.40	.00	.0	2.0	30.0715	30.0715	4
	5	WEST	-.50	.00	.0	2.0	25.6716	25.6716	5
	6	WEST	-.60	.00	.0	2.0	21.3669	21.3669	6
	7	WEST	-.70	.00	.0	2.0	17.7560	17.7560	7
	8	WEST	-.80	.00	.0	2.0	14.8600	14.8600	8
	9	WEST	-.90	.00	.0	2.0	12.5604	12.5604	9
	10	WEST	-1.00	.00	.0	2.0	10.7284	10.7284	10
	11	WEST	-1.20	.00	.0	2.0	8.0615	8.0615	11
	12	WEST	-1.50	.00	.0	2.0	5.5873	5.5873	12
	13	WEST	-2.00	.00	.0	2.0	3.4200	3.4200	13
	14	WEST	-2.50	.00	.0	2.0	2.3170	2.3170	14
	15	WEST	-3.00	.00	.0	2.0	1.6850	1.6850	15
	16	WEST	-4.00	.00	.0	2.0	1.0540	1.0540	16
	17	WEST	-5.00	.00	.0	2.0	.7855	.7855	17

HOUR	THETA (DEG)	SPEED (M/S)	MIXING HEIGHT(M)	TEMP (K)	STABILITY CLASS
19	90.00	7.00	300.00	298.00	3

FINAL HT (M) 24.97

DIST FIN HT (KM) .246

0	RECEPTOR NO.	NAME	EAST COORD	NORTH COORD	RECEPTOR HT ABV GRD (M)	RECEPTOR GRD-LVL ELEV (USER HT UNITS)	TOTAL FROM SIGNIF POINT SOURCES	TOTAL FROM ALL SOURCES	CONCENTRATION RANK
	1	WEST	-.10	.00	.0	2.0	166.6522	166.6522	1
	2	WEST	-.20	.00	.0	2.0	61.2320	61.2320	2
	3	WEST	-.30	.00	.0	2.0	40.7900	40.7900	3
	4	WEST	-.40	.00	.0	2.0	31.4690	31.4690	4
	5	WEST	-.50	.00	.0	2.0	24.0139	24.0139	5
	6	WEST	-.60	.00	.0	2.0	18.6434	18.6434	6
	7	WEST	-.70	.00	.0	2.0	14.7993	14.7993	7
	8	WEST	-.80	.00	.0	2.0	11.9999	11.9999	8
	9	WEST	-.90	.00	.0	2.0	9.9150	9.9150	9
	10	WEST	-1.00	.00	.0	2.0	8.3270	8.3270	10
	11	WEST	-1.20	.00	.0	2.0	6.1151	6.1151	11
	12	WEST	-1.50	.00	.0	2.0	4.1552	4.1552	12
	13	WEST	-2.00	.00	.0	2.0	2.5022	2.5022	13
	14	WEST	-2.50	.00	.0	2.0	1.6816	1.6816	14
	15	WEST	-3.00	.00	.0	2.0	1.2169	1.2169	15
	16	WEST	-4.00	.00	.0	2.0	.7563	.7563	16
	17	WEST	-5.00	.00	.0	2.0	.5619	.5619	17

HOUR	THETA (DEG)	SPEED (M/S)	MIXING HEIGHT(M)	TEMP (K)	STABILITY CLASS
20	90.00	8.00	300.00	298.00	3

FINAL HT (M) 21.85

DIST FIN HT (KM) .246

0	RECEPTOR NO.	NAME	EAST COORD	NORTH COORD	RECEPTOR HT ABV GRD (M)	RECEPTOR GRD-LVL ELEV (USER HT UNITS)	TOTAL FROM SIGNIF POINT SOURCES	TOTAL FROM ALL SOURCES	CONCENTRATION RANK
	1	WEST	-.10	.00	.0	2.0	192.4648	192.4648	1
	2	WEST	-.20	.00	.0	2.0	66.9776	66.9776	2
	3	WEST	-.30	.00	.0	2.0	41.7270	41.7270	3
	4	WEST	-.40	.00	.0	2.0	30.4153	30.4153	4
	5	WEST	-.50	.00	.0	2.0	22.5054	22.5054	5
	6	WEST	-.60	.00	.0	2.0	17.1536	17.1536	6
	7	WEST	-.70	.00	.0	2.0	13.4565	13.4565	7
	8	WEST	-.80	.00	.0	2.0	10.8237	10.8237	8
	9	WEST	-.90	.00	.0	2.0	8.8920	8.8920	9
	10	WEST	-1.00	.00	.0	2.0	7.4364	7.4364	10
	11	WEST	-1.20	.00	.0	2.0	5.4301	5.4301	11
	12	WEST	-1.50	.00	.0	2.0	3.6718	3.6718	12
	13	WEST	-2.00	.00	.0	2.0	2.2023	2.2023	13
	14	WEST	-2.50	.00	.0	2.0	1.4771	1.4771	14
	15	WEST	-3.00	.00	.0	2.0	1.0677	1.0677	15
	16	WEST	-4.00	.00	.0	2.0	.6625	.6625	16
	17	WEST	-5.00	.00	.0	2.0	.4918	.4918	17

HOUR	THETA (DEG)	SPEED (M/S)	MIXING HEIGHT(M)	TEMP (K)	STABILITY CLASS
21	90.00	9.00	300.00	298.00	3

FINAL HT (M) 19.42

DIST FIN HT (KM) .246

0	RECEPTOR NO.	NAME	EAST COORD	NORTH COORD	RECEPTOR HT ABV GRD (M)	RECEPTOR GRD-LVL ELEV (USER HT UNITS)	TOTAL FROM SIGNIF POINT SOURCES	TOTAL FROM ALL SOURCES	CONCENTRATION RANK
	1	WEST	-.10	.00	.0	2.0	209.8422	209.8422	1
	2	WEST	-.20	.00	.0	2.0	69.9862	69.9862	2
	3	WEST	-.30	.00	.0	2.0	41.4446	41.4446	3
	4	WEST	-.40	.00	.0	2.0	28.9833	28.9833	4
	5	WEST	-.50	.00	.0	2.0	20.9805	20.9805	5
	6	WEST	-.60	.00	.0	2.0	15.7859	15.7859	6
	7	WEST	-.70	.00	.0	2.0	12.2819	12.2819	7
	8	WEST	-.80	.00	.0	2.0	9.8238	9.8238	8
	9	WEST	-.90	.00	.0	2.0	8.0387	8.0387	9
	10	WEST	-1.00	.00	.0	2.0	6.7032	6.7032	10
	11	WEST	-1.20	.00	.0	2.0	4.8756	4.8756	11
	12	WEST	-1.50	.00	.0	2.0	3.2858	3.2858	12
	13	WEST	-2.00	.00	.0	2.0	1.9654	1.9654	13
	14	WEST	-2.50	.00	.0	2.0	1.3165	1.3165	14
	15	WEST	-3.00	.00	.0	2.0	.9508	.9508	15
	16	WEST	-4.00	.00	.0	2.0	.5894	.5894	16
	17	WEST	-5.00	.00	.0	2.0	.4373	.4373	17

HOUR	THETA (DEG)	SPEED (M/S)	MIXING HEIGHT(M)	TEMP (K)	STABILITY CLASS
22	90.00	10.00	300.00	298.00	3

FINAL HT (M) 17.48

DIST FIN HT (KM) .246

0	RECEPTOR NO.	NAME	EAST COORD	NORTH COORD	RECEPTOR HT ABV GRD (M)	RECEPTOR GRD-LVL ELEV (USER HT UNITS)	TOTAL FROM SIGNIF POINT SOURCES	TOTAL FROM ALL SOURCES	CONCENTRATION RANK
	1	WEST	-.10	.00	.0	2.0	220.1559	220.1559	1
	2	WEST	-.20	.00	.0	2.0	71.0287	71.0287	2
	3	WEST	-.30	.00	.0	2.0	40.4592	40.4592	3
	4	WEST	-.40	.00	.0	2.0	27.4326	27.4326	4
	5	WEST	-.50	.00	.0	2.0	19.5412	19.5412	5
	6	WEST	-.60	.00	.0	2.0	14.5655	14.5655	6
	7	WEST	-.70	.00	.0	2.0	11.2650	11.2650	7
	8	WEST	-.80	.00	.0	2.0	8.9743	8.9743	8
	9	WEST	-.90	.00	.0	2.0	7.3227	7.3227	9
	10	WEST	-1.00	.00	.0	2.0	6.0934	6.0934	10
	11	WEST	-1.20	.00	.0	2.0	4.4196	4.4196	11
	12	WEST	-1.50	.00	.0	2.0	2.9714	2.9714	12
	13	WEST	-2.00	.00	.0	2.0	1.7739	1.7739	13
	14	WEST	-2.50	.00	.0	2.0	1.1870	1.1870	14
	15	WEST	-3.00	.00	.0	2.0	.8568	.8568	15
	16	WEST	-4.00	.00	.0	2.0	.5307	.5307	16
	17	WEST	-5.00	.00	.0	2.0	.3936	.3936	17

HOUR	THETA (DEG)	SPEED (M/S)	MIXING HEIGHT(M)	TEMP (K)	STABILITY CLASS
23	90.00	1.00	300.00	298.00	4

FINAL HT (M) 150.79

DIST FIN HT (KM) .246

0 RECEPTOR NO.	NAME	EAST COORD	NORTH COORD	RECEPTOR HT ABV GRD (M)	RECEPTOR GRD-LVL ELEV (USER HT UNITS)	TOTAL FROM SIGNIF POINT SOURCES	TOTAL FROM ALL SOURCES	CONCENTRATION RANK
1	WEST	-.10	.00	.0	2.0	1.3874	1.3874	9
2	WEST	-.20	.00	.0	2.0	.6075	.6075	15
3	WEST	-.30	.00	.0	2.0	.5130	.5130	17
4	WEST	-.40	.00	.0	2.0	.5968	.5968	16
5	WEST	-.50	.00	.0	2.0	.7008	.7008	14
6	WEST	-.60	.00	.0	2.0	.8256	.8256	13
7	WEST	-.70	.00	.0	2.0	.9717	.9717	12
8	WEST	-.80	.00	.0	2.0	1.1383	1.1383	11
9	WEST	-.90	.00	.0	2.0	1.3241	1.3241	10
10	WEST	-1.00	.00	.0	2.0	1.5267	1.5267	8
11	WEST	-1.20	.00	.0	2.0	1.8204	1.8204	7
12	WEST	-1.50	.00	.0	2.0	2.2483	2.2483	6
13	WEST	-2.00	.00	.0	2.0	2.8666	2.8666	5
14	WEST	-2.50	.00	.0	2.0	3.3222	3.3222	4
15	WEST	-3.00	.00	.0	2.0	3.6157	3.6157	3
16	WEST	-4.00	.00	.0	2.0	3.7710	3.7710	1
17	WEST	-5.00	.00	.0	2.0	3.6741	3.6741	2

HOUR	THETA (DEG)	SPEED (M/S)	MIXING HEIGHT(M)	TEMP (K)	STABILITY CLASS
24	90.00	1.50	300.00	298.00	4

FINAL HT (M) 127.69

DIST FIN HT (KM) .246

0 RECEPTOR NO.	NAME	EAST COORD	NORTH COORD	RECEPTOR HT ABV GRD (M)	RECEPTOR GRD-LVL ELEV (USER HT UNITS)	TOTAL FROM SIGNIF POINT SOURCES	TOTAL FROM ALL SOURCES	CONCENTRATION RANK
1	WEST	-.10	.00	.0	2.0	1.8710	1.8710	10
2	WEST	-.20	.00	.0	2.0	.8078	.8078	16
3	WEST	-.30	.00	.0	2.0	.6991	.6991	17
4	WEST	-.40	.00	.0	2.0	.8496	.8496	15
5	WEST	-.50	.00	.0	2.0	1.0382	1.0382	14
6	WEST	-.60	.00	.0	2.0	1.2651	1.2651	13
7	WEST	-.70	.00	.0	2.0	1.5285	1.5285	12
8	WEST	-.80	.00	.0	2.0	1.8241	1.8241	11
9	WEST	-.90	.00	.0	2.0	2.1457	2.1457	9
10	WEST	-1.00	.00	.0	2.0	2.4858	2.4858	8
11	WEST	-1.20	.00	.0	2.0	2.9489	2.9489	7
12	WEST	-1.50	.00	.0	2.0	3.5611	3.5611	6
13	WEST	-2.00	.00	.0	2.0	4.2993	4.2993	4
14	WEST	-2.50	.00	.0	2.0	4.7017	4.7017	2
15	WEST	-3.00	.00	.0	2.0	4.8507	4.8507	1
16	WEST	-4.00	.00	.0	2.0	4.6590	4.6590	3
17	WEST	-5.00	.00	.0	2.0	4.2690	4.2690	5

HOUR	THETA (DEG)	SPEED (M/S)	MIXING HEIGHT(M)	TEMP (K)	STABILITY CLASS
25	90.00	2.00	300.00	298.00	4

FINAL HT (M) 94.71

DIST FIN HT (KM) .246

0 RECEPTOR NO.	NAME	EAST COORD	NORTH COORD	RECEPTOR HT ABV GRD (M)	RECEPTOR GRD-LVL ELEV (USER HT UNITS)	TOTAL FROM SIGNIF POINT SOURCES	TOTAL FROM ALL SOURCES	CONCENTRATION RANK
1	WEST	-.10	.00	.0	2.0	3.8518	3.8518	11
2	WEST	-.20	.00	.0	2.0	1.5493	1.5493	16
3	WEST	-.30	.00	.0	2.0	1.4002	1.4002	17
4	WEST	-.40	.00	.0	2.0	1.8467	1.8467	15
5	WEST	-.50	.00	.0	2.0	2.3996	2.3996	14
6	WEST	-.60	.00	.0	2.0	3.0392	3.0392	13
7	WEST	-.70	.00	.0	2.0	3.7358	3.7358	12
8	WEST	-.80	.00	.0	2.0	4.4547	4.4547	10
9	WEST	-.90	.00	.0	2.0	5.1626	5.1626	8
10	WEST	-1.00	.00	.0	2.0	5.8312	5.8312	6
11	WEST	-1.20	.00	.0	2.0	6.5446	6.5446	5
12	WEST	-1.50	.00	.0	2.0	7.2098	7.2098	3
13	WEST	-2.00	.00	.0	2.0	7.5254	7.5254	1
14	WEST	-2.50	.00	.0	2.0	7.2856	7.2856	2
15	WEST	-3.00	.00	.0	2.0	6.8125	6.8125	4
16	WEST	-4.00	.00	.0	2.0	5.7152	5.7152	7
17	WEST	-5.00	.00	.0	2.0	4.7765	4.7765	9

HOUR	THETA (DEG)	SPEED (M/S)	MIXING HEIGHT(M)	TEMP (K)	STABILITY CLASS
26	90.00	2.50	300.00	298.00	4

FINAL HT (M) 75.77

DIST FIN HT (KM) .246

0 RECEPTOR NO.	NAME	EAST COORD	NORTH COORD	RECEPTOR HT ABV GRD (M)	RECEPTOR GRD-LVL ELEV (USER HT UNITS)	TOTAL FROM SIGNIF POINT SOURCES	TOTAL FROM ALL SOURCES	CONCENTRATION RANK
1	WEST	-.10	.00	.0	2.0	6.0040	6.0040	10
2	WEST	-.20	.00	.0	2.0	2.4670	2.4670	16
3	WEST	-.30	.00	.0	2.0	2.3708	2.3708	17
4	WEST	-.40	.00	.0	2.0	3.3368	3.3368	15
5	WEST	-.50	.00	.0	2.0	4.4780	4.4780	14
6	WEST	-.60	.00	.0	2.0	5.6987	5.6987	12
7	WEST	-.70	.00	.0	2.0	6.8989	6.8989	9
8	WEST	-.80	.00	.0	2.0	7.9974	7.9974	7
9	WEST	-.90	.00	.0	2.0	8.9412	8.9412	5
10	WEST	-1.00	.00	.0	2.0	9.7058	9.7058	3
11	WEST	-1.20	.00	.0	2.0	10.2088	10.2088	2
12	WEST	-1.50	.00	.0	2.0	10.3044	10.3044	1
13	WEST	-2.00	.00	.0	2.0	9.5885	9.5885	4
14	WEST	-2.50	.00	.0	2.0	8.5401	8.5401	6
15	WEST	-3.00	.00	.0	2.0	7.5090	7.5090	8
16	WEST	-4.00	.00	.0	2.0	5.8251	5.8251	11
17	WEST	-5.00	.00	.0	2.0	4.6319	4.6319	13

HOUR	THETA (DEG)	SPEED (M/S)	MIXING HEIGHT(M)	TEMP (K)	STABILITY CLASS
27	90.00	3.00	300.00	298.00	4

FINAL HT (M) 63.14

DIST FIN HT (KM) .246

0	RECEPTOR NO.	NAME	EAST COORD	NORTH COORD	RECEPTOR HT ABV GRD (M)	RECEPTOR GRD-LVL ELEV (USER HT UNITS)	TOTAL FROM SIGNIF POINT SOURCES	TOTAL FROM ALL SOURCES	CONCENTRATION RANK
	1	WEST	-.10	.00	.0	2.0	9.0855	9.0855	9
	2	WEST	-.20	.00	.0	2.0	3.8093	3.8093	17
	3	WEST	-.30	.00	.0	2.0	3.8386	3.8386	16
	4	WEST	-.40	.00	.0	2.0	5.5845	5.5845	13
	5	WEST	-.50	.00	.0	2.0	7.4767	7.4767	12
	6	WEST	-.60	.00	.0	2.0	9.2794	9.2794	8
	7	WEST	-.70	.00	.0	2.0	10.8229	10.8229	6
	8	WEST	-.80	.00	.0	2.0	12.0254	12.0254	5
	9	WEST	-.90	.00	.0	2.0	12.8753	12.8753	3
	10	WEST	-1.00	.00	.0	2.0	13.4041	13.4041	1
	11	WEST	-1.20	.00	.0	2.0	13.2723	13.2723	2
	12	WEST	-1.50	.00	.0	2.0	12.4552	12.4552	4
	13	WEST	-2.00	.00	.0	2.0	10.6355	10.6355	7
	14	WEST	-2.50	.00	.0	2.0	8.9439	8.9439	10
	15	WEST	-3.00	.00	.0	2.0	7.5536	7.5536	11
	16	WEST	-4.00	.00	.0	2.0	5.5793	5.5793	14
	17	WEST	-5.00	.00	.0	2.0	4.3051	4.3051	15

HOUR	THETA (DEG)	SPEED (M/S)	MIXING HEIGHT(M)	TEMP (K)	STABILITY CLASS
28	90.00	4.00	300.00	298.00	4

FINAL HT (M) 47.36

DIST FIN HT (KM) .246

0	RECEPTOR NO.	NAME	EAST COORD	NORTH COORD	RECEPTOR HT ABV GRD (M)	RECEPTOR GRD-LVL ELEV (USER HT UNITS)	TOTAL FROM SIGNIF POINT SOURCES	TOTAL FROM ALL SOURCES	CONCENTRATION RANK
	1	WEST	-.10	.00	.0	2.0	19.2342	19.2342	1
	2	WEST	-.20	.00	.0	2.0	8.2733	8.2733	14
	3	WEST	-.30	.00	.0	2.0	8.6790	8.6790	12
	4	WEST	-.40	.00	.0	2.0	12.4032	12.4032	10
	5	WEST	-.50	.00	.0	2.0	15.4988	15.4988	8
	6	WEST	-.60	.00	.0	2.0	17.6108	17.6108	6
	7	WEST	-.70	.00	.0	2.0	18.7635	18.7635	4
	8	WEST	-.80	.00	.0	2.0	19.1503	19.1503	2
	9	WEST	-.90	.00	.0	2.0	18.9925	18.9925	3
	10	WEST	-1.00	.00	.0	2.0	18.4792	18.4792	5
	11	WEST	-1.20	.00	.0	2.0	16.7278	16.7278	7
	12	WEST	-1.50	.00	.0	2.0	14.2115	14.2115	9
	13	WEST	-2.00	.00	.0	2.0	10.8917	10.8917	11
	14	WEST	-2.50	.00	.0	2.0	8.5588	8.5588	13
	15	WEST	-3.00	.00	.0	2.0	6.9049	6.9049	15
	16	WEST	-4.00	.00	.0	2.0	4.8325	4.8325	16
	17	WEST	-5.00	.00	.0	2.0	3.6109	3.6109	17

HOUR	THETA (DEG)	SPEED (M/S)	MIXING HEIGHT(M)	TEMP (K)	STABILITY CLASS
29	90.00	5.00	300.00	298.00	4

FINAL HT (M) 37.88

DIST FIN HT (KM) .246

0

RECEPTOR NO.	NAME	EAST COORD	NORTH COORD	RECEPTOR HT ABV GRD (M)	RECEPTOR GRD-LVL ELEV (USER HT UNITS)	TOTAL FROM SIGNIF POINT SOURCES	TOTAL FROM ALL SOURCES	CONCENTRATION RANK
1	WEST	-.10	.00	.0	2.0	36.5286	36.5286	1
2	WEST	-.20	.00	.0	2.0	15.7113	15.7113	11
3	WEST	-.30	.00	.0	2.0	16.1105	16.1105	10
4	WEST	-.40	.00	.0	2.0	21.1789	21.1789	7
5	WEST	-.50	.00	.0	2.0	23.9978	23.9978	4
6	WEST	-.60	.00	.0	2.0	24.9004	24.9004	2
7	WEST	-.70	.00	.0	2.0	24.5390	24.5390	3
8	WEST	-.80	.00	.0	2.0	23.4647	23.4647	5
9	WEST	-.90	.00	.0	2.0	22.0482	22.0482	6
10	WEST	-1.00	.00	.0	2.0	20.5129	20.5129	8
11	WEST	-1.20	.00	.0	2.0	17.5608	17.5608	9
12	WEST	-1.50	.00	.0	2.0	14.0762	14.0762	12
13	WEST	-2.00	.00	.0	2.0	10.1655	10.1655	13
14	WEST	-2.50	.00	.0	2.0	7.7090	7.7090	14
15	WEST	-3.00	.00	.0	2.0	6.0760	6.0760	15
16	WEST	-4.00	.00	.0	2.0	4.1398	4.1398	16
17	WEST	-5.00	.00	.0	2.0	3.0452	3.0452	17

HOUR	THETA (DEG)	SPEED (M/S)	MIXING HEIGHT(M)	TEMP (K)	STABILITY CLASS
30	90.00	7.00	300.00	298.00	4

FINAL HT (M) 27.06

DIST FIN HT (KM) .246

0

RECEPTOR NO.	NAME	EAST COORD	NORTH COORD	RECEPTOR HT ABV GRD (M)	RECEPTOR GRD-LVL ELEV (USER HT UNITS)	TOTAL FROM SIGNIF POINT SOURCES	TOTAL FROM ALL SOURCES	CONCENTRATION RANK
1	WEST	-.10	.00	.0	2.0	95.1251	95.1251	1
2	WEST	-.20	.00	.0	2.0	38.7318	38.7318	2
3	WEST	-.30	.00	.0	2.0	34.7423	34.7423	5
4	WEST	-.40	.00	.0	2.0	37.2839	37.2839	3
5	WEST	-.50	.00	.0	2.0	35.6751	35.6751	4
6	WEST	-.60	.00	.0	2.0	32.4618	32.4618	6
7	WEST	-.70	.00	.0	2.0	28.9224	28.9224	7
8	WEST	-.80	.00	.0	2.0	25.5816	25.5816	8
9	WEST	-.90	.00	.0	2.0	22.6121	22.6121	9
10	WEST	-1.00	.00	.0	2.0	20.0392	20.0392	10
11	WEST	-1.20	.00	.0	2.0	16.1847	16.1847	11
12	WEST	-1.50	.00	.0	2.0	12.2387	12.2387	12
13	WEST	-2.00	.00	.0	2.0	8.3464	8.3464	13
14	WEST	-2.50	.00	.0	2.0	6.1224	6.1224	14
15	WEST	-3.00	.00	.0	2.0	4.7232	4.7232	15
16	WEST	-4.00	.00	.0	2.0	3.1409	3.1409	16
17	WEST	-5.00	.00	.0	2.0	2.2782	2.2782	17

HOUR	THETA (DEG)	SPEED (M/S)	MIXING HEIGHT(M)	TEMP (K)	STABILITY CLASS
31	90.00	8.00	300.00	298.00	4

FINAL HT (M) 23.68

DIST FIN HT (KM) .246

0	RECEPTOR NO.	NAME	EAST COORD	NORTH COORD	RECEPTOR HT ABV GRD (M)	RECEPTOR GRD-LVL ELEV (USER HT UNITS)	TOTAL FROM SIGNIF POINT SOURCES	TOTAL FROM ALL SOURCES	CONCENTRATION RANK
	1	WEST	-.10	.00	.0	2.0	133.2215	133.2215	1
	2	WEST	-.20	.00	.0	2.0	52.1905	52.1905	2
	3	WEST	-.30	.00	.0	2.0	43.4275	43.4275	3
	4	WEST	-.40	.00	.0	2.0	42.7108	42.7108	4
	5	WEST	-.50	.00	.0	2.0	38.4391	38.4391	5
	6	WEST	-.60	.00	.0	2.0	33.5039	33.5039	6
	7	WEST	-.70	.00	.0	2.0	28.9415	28.9415	7
	8	WEST	-.80	.00	.0	2.0	25.0198	25.0198	8
	9	WEST	-.90	.00	.0	2.0	21.7354	21.7354	9
	10	WEST	-1.00	.00	.0	2.0	19.0047	19.0047	10
	11	WEST	-1.20	.00	.0	2.0	15.1095	15.1095	11
	12	WEST	-1.50	.00	.0	2.0	11.2512	11.2512	12
	13	WEST	-2.00	.00	.0	2.0	7.5604	7.5604	13
	14	WEST	-2.50	.00	.0	2.0	5.4992	5.4992	14
	15	WEST	-3.00	.00	.0	2.0	4.2197	4.2197	15
	16	WEST	-4.00	.00	.0	2.0	2.7892	2.7892	16
	17	WEST	-5.00	.00	.0	2.0	2.0161	2.0161	17

HOUR	THETA (DEG)	SPEED (M/S)	MIXING HEIGHT(M)	TEMP (K)	STABILITY CLASS
32	90.00	9.00	300.00	298.00	4

FINAL HT (M) 21.05

DIST FIN HT (KM) .246

0	RECEPTOR NO.	NAME	EAST COORD	NORTH COORD	RECEPTOR HT ABV GRD (M)	RECEPTOR GRD-LVL ELEV (USER HT UNITS)	TOTAL FROM SIGNIF POINT SOURCES	TOTAL FROM ALL SOURCES	CONCENTRATION RANK
	1	WEST	-.10	.00	.0	2.0	173.1974	173.1974	1
	2	WEST	-.20	.00	.0	2.0	65.2767	65.2767	2
	3	WEST	-.30	.00	.0	2.0	50.6664	50.6664	3
	4	WEST	-.40	.00	.0	2.0	46.3065	46.3065	4
	5	WEST	-.50	.00	.0	2.0	39.7120	39.7120	5
	6	WEST	-.60	.00	.0	2.0	33.5021	33.5021	6
	7	WEST	-.70	.00	.0	2.0	28.2845	28.2845	7
	8	WEST	-.80	.00	.0	2.0	24.0479	24.0479	8
	9	WEST	-.90	.00	.0	2.0	20.6318	20.6318	9
	10	WEST	-1.00	.00	.0	2.0	17.8674	17.8674	10
	11	WEST	-1.20	.00	.0	2.0	14.0477	14.0477	11
	12	WEST	-1.50	.00	.0	2.0	10.3482	10.3482	12
	13	WEST	-2.00	.00	.0	2.0	6.8823	6.8823	13
	14	WEST	-2.50	.00	.0	2.0	4.9769	4.9769	14
	15	WEST	-3.00	.00	.0	2.0	3.8048	3.8048	15
	16	WEST	-4.00	.00	.0	2.0	2.5045	2.5045	16
	17	WEST	-5.00	.00	.0	2.0	1.8060	1.8060	17

HOUR	THETA (DEG)	SPEED (M/S)	MIXING HEIGHT(M)	TEMP (K)	STABILITY CLASS
33	90.00	10.00	300.00	298.00	4

FINAL HT (M) 18.94

DIST FIN HT (KM) .246

0	RECEPTOR NO.	NAME	EAST COORD	NORTH COORD	RECEPTOR HT ABV GRD (M)	RECEPTOR GRD-LVL ELEV (USER HT UNITS)	TOTAL FROM SIGNIF POINT SOURCES	TOTAL FROM ALL SOURCES	CONCENTRATION RANK
	1	WEST	-.10	.00	.0	2.0	212.0873	212.0873	1
	2	WEST	-.20	.00	.0	2.0	77.0948	77.0948	2
	3	WEST	-.30	.00	.0	2.0	56.2636	56.2636	3
	4	WEST	-.40	.00	.0	2.0	48.3979	48.3979	4
	5	WEST	-.50	.00	.0	2.0	39.9565	39.9565	5
	6	WEST	-.60	.00	.0	2.0	32.8750	32.8750	6
	7	WEST	-.70	.00	.0	2.0	27.2797	27.2797	7
	8	WEST	-.80	.00	.0	2.0	22.9074	22.9074	8
	9	WEST	-.90	.00	.0	2.0	19.4728	19.4728	9
	10	WEST	-1.00	.00	.0	2.0	16.7451	16.7451	10
	11	WEST	-1.20	.00	.0	2.0	13.0585	13.0585	11
	12	WEST	-1.50	.00	.0	2.0	9.5443	9.5443	12
	13	WEST	-2.00	.00	.0	2.0	6.3007	6.3007	13
	14	WEST	-2.50	.00	.0	2.0	4.5371	4.5371	14
	15	WEST	-3.00	.00	.0	2.0	3.4594	3.4594	15
	16	WEST	-4.00	.00	.0	2.0	2.2704	2.2704	16
	17	WEST	-5.00	.00	.0	2.0	1.6344	1.6344	17

HOUR	THETA (DEG)	SPEED (M/S)	MIXING HEIGHT(M)	TEMP (K)	STABILITY CLASS
34	90.00	12.00	300.00	298.00	4

FINAL HT (M) 15.79

DIST FIN HT (KM) .246

0	RECEPTOR NO.	NAME	EAST COORD	NORTH COORD	RECEPTOR HT ABV GRD (M)	RECEPTOR GRD-LVL ELEV (USER HT UNITS)	TOTAL FROM SIGNIF POINT SOURCES	TOTAL FROM ALL SOURCES	CONCENTRATION RANK
	1	WEST	-.10	.00	.0	2.0	278.6806	278.6806	1
	2	WEST	-.20	.00	.0	2.0	95.3044	95.3044	2
	3	WEST	-.30	.00	.0	2.0	62.9977	62.9977	3
	4	WEST	-.40	.00	.0	2.0	49.4837	49.4837	4
	5	WEST	-.50	.00	.0	2.0	38.6911	38.6911	5
	6	WEST	-.60	.00	.0	2.0	30.7441	30.7441	6
	7	WEST	-.70	.00	.0	2.0	24.9157	24.9157	7
	8	WEST	-.80	.00	.0	2.0	20.5740	20.5740	8
	9	WEST	-.90	.00	.0	2.0	17.2740	17.2740	9
	10	WEST	-1.00	.00	.0	2.0	14.7151	14.7151	10
	11	WEST	-1.20	.00	.0	2.0	11.3522	11.3522	11
	12	WEST	-1.50	.00	.0	2.0	8.2117	8.2117	12
	13	WEST	-2.00	.00	.0	2.0	5.3683	5.3683	13
	14	WEST	-2.50	.00	.0	2.0	3.8446	3.8446	14
	15	WEST	-3.00	.00	.0	2.0	2.9212	2.9212	15
	16	WEST	-4.00	.00	.0	2.0	1.9098	1.9098	16
	17	WEST	-5.00	.00	.0	2.0	1.3718	1.3718	17

HOUR	THETA (DEG)	SPEED (M/S)	MIXING HEIGHT(M)	TEMP (K)	STABILITY CLASS
35	90.00	15.00	300.00	298.00	4

FINAL HT (M) 12.63

DIST FIN HT (KM) .246

0	RECEPTOR NO.	NAME	EAST COORD	NORTH COORD	RECEPTOR HT ABV GRD (M)	RECEPTOR GRD-LVL ELEV (USER HT UNITS)	TOTAL FROM SIGNIF POINT SOURCES	TOTAL FROM ALL SOURCES	CONCENTRATION RANK
	1	WEST	-.10	.00	.0	2.0	341.1845	341.1845	1
	2	WEST	-.20	.00	.0	2.0	109.4247	109.4247	2
	3	WEST	-.30	.00	.0	2.0	65.4311	65.4311	3
	4	WEST	-.40	.00	.0	2.0	47.1740	47.1740	4
	5	WEST	-.50	.00	.0	2.0	35.1298	35.1298	5
	6	WEST	-.60	.00	.0	2.0	27.0795	27.0795	6
	7	WEST	-.70	.00	.0	2.0	21.5062	21.5062	7
	8	WEST	-.80	.00	.0	2.0	17.5080	17.5080	8
	9	WEST	-.90	.00	.0	2.0	14.5478	14.5478	9
	10	WEST	-1.00	.00	.0	2.0	12.2958	12.2958	10
	11	WEST	-1.20	.00	.0	2.0	9.4012	9.4012	11
	12	WEST	-1.50	.00	.0	2.0	6.7427	6.7427	12
	13	WEST	-2.00	.00	.0	2.0	4.3728	4.3728	13
	14	WEST	-2.50	.00	.0	2.0	3.1177	3.1177	14
	15	WEST	-3.00	.00	.0	2.0	2.3622	2.3622	15
	16	WEST	-4.00	.00	.0	2.0	1.5394	1.5394	16
	17	WEST	-5.00	.00	.0	2.0	1.1038	1.1038	17

HOUR	THETA (DEG)	SPEED (M/S)	MIXING HEIGHT(M)	TEMP (K)	STABILITY CLASS
36	90.00	20.00	300.00	298.00	4

FINAL HT (M) 9.47

DIST FIN HT (KM) .246

0	RECEPTOR NO.	NAME	EAST COORD	NORTH COORD	RECEPTOR HT ABV GRD (M)	RECEPTOR GRD-LVL ELEV (USER HT UNITS)	TOTAL FROM SIGNIF POINT SOURCES	TOTAL FROM ALL SOURCES	CONCENTRATION RANK
	1	WEST	-.10	.00	.0	2.0	368.5301	368.5301	1
	2	WEST	-.20	.00	.0	2.0	111.4719	111.4719	2
	3	WEST	-.30	.00	.0	2.0	60.8156	60.8156	3
	4	WEST	-.40	.00	.0	2.0	40.7127	40.7127	4
	5	WEST	-.50	.00	.0	2.0	29.1161	29.1161	5
	6	WEST	-.60	.00	.0	2.0	21.8982	21.8982	6
	7	WEST	-.70	.00	.0	2.0	17.1123	17.1123	7
	8	WEST	-.80	.00	.0	2.0	13.7751	13.7751	8
	9	WEST	-.90	.00	.0	2.0	11.3529	11.3529	9
	10	WEST	-1.00	.00	.0	2.0	9.5368	9.5368	10
	11	WEST	-1.20	.00	.0	2.0	7.2410	7.2410	11
	12	WEST	-1.50	.00	.0	2.0	5.1591	5.1591	12
	13	WEST	-2.00	.00	.0	2.0	3.3253	3.3253	13
	14	WEST	-2.50	.00	.0	2.0	2.3626	2.3626	14
	15	WEST	-3.00	.00	.0	2.0	1.7862	1.7862	15
	16	WEST	-4.00	.00	.0	2.0	1.1613	1.1613	16
	17	WEST	-5.00	.00	.0	2.0	.8315	.8315	17

HOUR	THETA (DEG)	SPEED (M/S)	MIXING HEIGHT(M)	TEMP (K)	STABILITY CLASS
37	90.00	1.00	300.00	298.00	5

FINAL HT (M) 72.73

DIST FIN HT (KM) .081

0	RECEPTOR NO.	NAME	EAST COORD	NORTH COORD	RECEPTOR HT ABV GRD (M)	RECEPTOR GRD-LVL ELEV (USER HT UNITS)	TOTAL FROM SIGNIF POINT SOURCES	TOTAL FROM ALL SOURCES	CONCENTRATION RANK
	1	WEST	-.10	.00	.0	2.0	2.0628	2.0628	17
	2	WEST	-.20	.00	.0	2.0	2.5745	2.5745	16
	3	WEST	-.30	.00	.0	2.0	3.3485	3.3485	15
	4	WEST	-.40	.00	.0	2.0	4.2521	4.2521	14
	5	WEST	-.50	.00	.0	2.0	5.3333	5.3333	13
	6	WEST	-.60	.00	.0	2.0	6.5638	6.5638	12
	7	WEST	-.70	.00	.0	2.0	7.9021	7.9021	11
	8	WEST	-.80	.00	.0	2.0	9.3003	9.3003	10
	9	WEST	-.90	.00	.0	2.0	10.7095	10.7095	9
	10	WEST	-1.00	.00	.0	2.0	12.0855	12.0855	8
	11	WEST	-1.20	.00	.0	2.0	13.8332	13.8332	6
	12	WEST	-1.50	.00	.0	2.0	15.7587	15.7587	4
	13	WEST	-2.00	.00	.0	2.0	17.3550	17.3550	1
	14	WEST	-2.50	.00	.0	2.0	17.2780	17.2780	2
	15	WEST	-3.00	.00	.0	2.0	16.6417	16.6417	3
	16	WEST	-4.00	.00	.0	2.0	14.7872	14.7872	5
	17	WEST	-5.00	.00	.0	2.0	12.8267	12.8267	7

HOUR	THETA (DEG)	SPEED (M/S)	MIXING HEIGHT(M)	TEMP (K)	STABILITY CLASS
38	90.00	1.50	300.00	298.00	5

FINAL HT (M) 72.73

DIST FIN HT (KM) .081

0	RECEPTOR NO.	NAME	EAST COORD	NORTH COORD	RECEPTOR HT ABV GRD (M)	RECEPTOR GRD-LVL ELEV (USER HT UNITS)	TOTAL FROM SIGNIF POINT SOURCES	TOTAL FROM ALL SOURCES	CONCENTRATION RANK
	1	WEST	-.10	.00	.0	2.0	2.0628	2.0628	17
	2	WEST	-.20	.00	.0	2.0	2.5745	2.5745	16
	3	WEST	-.30	.00	.0	2.0	3.3485	3.3485	15
	4	WEST	-.40	.00	.0	2.0	4.2521	4.2521	14
	5	WEST	-.50	.00	.0	2.0	5.3333	5.3333	13
	6	WEST	-.60	.00	.0	2.0	6.5638	6.5638	12
	7	WEST	-.70	.00	.0	2.0	7.9021	7.9021	11
	8	WEST	-.80	.00	.0	2.0	9.3003	9.3003	10
	9	WEST	-.90	.00	.0	2.0	10.7095	10.7095	9
	10	WEST	-1.00	.00	.0	2.0	12.0855	12.0855	8
	11	WEST	-1.20	.00	.0	2.0	13.8332	13.8332	6
	12	WEST	-1.50	.00	.0	2.0	15.7587	15.7587	4
	13	WEST	-2.00	.00	.0	2.0	17.3550	17.3550	1
	14	WEST	-2.50	.00	.0	2.0	17.2780	17.2780	2
	15	WEST	-3.00	.00	.0	2.0	16.6417	16.6417	3
	16	WEST	-4.00	.00	.0	2.0	14.7872	14.7872	5
	17	WEST	-5.00	.00	.0	2.0	12.8267	12.8267	7

HOUR	THETA (DEG)	SPEED (M/S)	MIXING HEIGHT(M)	TEMP (K)	STABILITY CLASS
39	90.00	2.00	300.00	298.00	5

FINAL HT (M) 69.54

DIST FIN HT (KM) .092

0	RECEPTOR NO.	NAME	EAST COORD	NORTH COORD	RECEPTOR HT ABV GRD (M)	RECEPTOR GRD-LVL ELEV (USER HT UNITS)	TOTAL FROM SIGNIF POINT SOURCES	TOTAL FROM ALL SOURCES	CONCENTRATION RANK
	1	WEST	-.10	.00	.0	2.0	2.0666	2.0666	17
	2	WEST	-.20	.00	.0	2.0	2.6200	2.6200	16
	3	WEST	-.30	.00	.0	2.0	3.4608	3.4608	15
	4	WEST	-.40	.00	.0	2.0	4.4425	4.4425	14
	5	WEST	-.50	.00	.0	2.0	5.6111	5.6111	13
	6	WEST	-.60	.00	.0	2.0	6.9283	6.9283	12
	7	WEST	-.70	.00	.0	2.0	8.3424	8.3424	11
	8	WEST	-.80	.00	.0	2.0	9.7965	9.7965	10
	9	WEST	-.90	.00	.0	2.0	11.2358	11.2358	9
	10	WEST	-1.00	.00	.0	2.0	12.6139	12.6139	7
	11	WEST	-1.20	.00	.0	2.0	14.2915	14.2915	5
	12	WEST	-1.50	.00	.0	2.0	16.0280	16.0280	4
	13	WEST	-2.00	.00	.0	2.0	17.2451	17.2451	1
	14	WEST	-2.50	.00	.0	2.0	16.8794	16.8794	2
	15	WEST	-3.00	.00	.0	2.0	16.0406	16.0406	3
	16	WEST	-4.00	.00	.0	2.0	13.9775	13.9775	6
	17	WEST	-5.00	.00	.0	2.0	11.9820	11.9820	8

HOUR	THETA (DEG)	SPEED (M/S)	MIXING HEIGHT(M)	TEMP (K)	STABILITY CLASS
40	90.00	2.50	300.00	298.00	5

FINAL HT (M) 62.88

DIST FIN HT (KM) .115

0	RECEPTOR NO.	NAME	EAST COORD	NORTH COORD	RECEPTOR HT ABV GRD (M)	RECEPTOR GRD-LVL ELEV (USER HT UNITS)	TOTAL FROM SIGNIF POINT SOURCES	TOTAL FROM ALL SOURCES	CONCENTRATION RANK
	1	WEST	-.10	.00	.0	2.0	3.5075	3.5075	16
	2	WEST	-.20	.00	.0	2.0	3.5009	3.5009	17
	3	WEST	-.30	.00	.0	2.0	4.6419	4.6419	15
	4	WEST	-.40	.00	.0	2.0	5.9346	5.9346	14
	5	WEST	-.50	.00	.0	2.0	7.4194	7.4194	13
	6	WEST	-.60	.00	.0	2.0	9.0228	9.0228	12
	7	WEST	-.70	.00	.0	2.0	10.6631	10.6631	11
	8	WEST	-.80	.00	.0	2.0	12.2637	12.2637	9
	9	WEST	-.90	.00	.0	2.0	13.7624	13.7624	7
	10	WEST	-1.00	.00	.0	2.0	15.1150	15.1150	6
	11	WEST	-1.20	.00	.0	2.0	16.5314	16.5314	4
	12	WEST	-1.50	.00	.0	2.0	17.6998	17.6998	2
	13	WEST	-2.00	.00	.0	2.0	17.9236	17.9236	1
	14	WEST	-2.50	.00	.0	2.0	16.8464	16.8464	3
	15	WEST	-3.00	.00	.0	2.0	15.5263	15.5263	5
	16	WEST	-4.00	.00	.0	2.0	12.9642	12.9642	8
	17	WEST	-5.00	.00	.0	2.0	10.8393	10.8393	10

HOUR	THETA (DEG)	SPEED (M/S)	MIXING HEIGHT(M)	TEMP (K)	STABILITY CLASS
41	90.00	3.00	300.00	298.00	5

FINAL HT (M) 59.17

DIST FIN HT (KM) .138

0 RECEPTOR NO.	NAME	EAST COORD	NORTH COORD	RECEPTOR HT ABV GRD (M)	RECEPTOR GRD-LVL ELEV (USER HT UNITS)	TOTAL FROM SIGNIF POINT SOURCES	TOTAL FROM ALL SOURCES	CONCENTRATION RANK
1	WEST	-.10	.00	.0	2.0	4.8697	4.8697	15
2	WEST	-.20	.00	.0	2.0	3.5172	3.5172	17
3	WEST	-.30	.00	.0	2.0	4.7725	4.7725	16
4	WEST	-.40	.00	.0	2.0	6.1878	6.1878	14
5	WEST	-.50	.00	.0	2.0	7.7908	7.7908	13
6	WEST	-.60	.00	.0	2.0	9.4859	9.4859	12
7	WEST	-.70	.00	.0	2.0	11.1745	11.1745	10
8	WEST	-.80	.00	.0	2.0	12.7725	12.7725	8
9	WEST	-.90	.00	.0	2.0	14.2183	14.2183	7
10	WEST	-1.00	.00	.0	2.0	15.4739	15.4739	5
11	WEST	-1.20	.00	.0	2.0	16.6547	16.6547	3
12	WEST	-1.50	.00	.0	2.0	17.4364	17.4364	1
13	WEST	-2.00	.00	.0	2.0	17.1248	17.1248	2
14	WEST	-2.50	.00	.0	2.0	15.7625	15.7625	4
15	WEST	-3.00	.00	.0	2.0	14.2977	14.2977	6
16	WEST	-4.00	.00	.0	2.0	11.6749	11.6749	9
17	WEST	-5.00	.00	.0	2.0	9.6344	9.6344	11

HOUR	THETA (DEG)	SPEED (M/S)	MIXING HEIGHT(M)	TEMP (K)	STABILITY CLASS
42	90.00	4.00	300.00	298.00	5

FINAL HT (M) 53.76

DIST FIN HT (KM) .184

0 RECEPTOR NO.	NAME	EAST COORD	NORTH COORD	RECEPTOR HT ABV GRD (M)	RECEPTOR GRD-LVL ELEV (USER HT UNITS)	TOTAL FROM SIGNIF POINT SOURCES	TOTAL FROM ALL SOURCES	CONCENTRATION RANK
1	WEST	-.10	.00	.0	2.0	8.8163	8.8163	12
2	WEST	-.20	.00	.0	2.0	3.5798	3.5798	17
3	WEST	-.30	.00	.0	2.0	5.0386	5.0386	16
4	WEST	-.40	.00	.0	2.0	6.6593	6.6593	15
5	WEST	-.50	.00	.0	2.0	8.4394	8.4394	13
6	WEST	-.60	.00	.0	2.0	10.2428	10.2428	10
7	WEST	-.70	.00	.0	2.0	11.9487	11.9487	9
8	WEST	-.80	.00	.0	2.0	13.4702	13.4702	7
9	WEST	-.90	.00	.0	2.0	14.7573	14.7573	5
10	WEST	-1.00	.00	.0	2.0	15.7920	15.7920	3
11	WEST	-1.20	.00	.0	2.0	16.5291	16.5291	2
12	WEST	-1.50	.00	.0	2.0	16.6763	16.6763	1
13	WEST	-2.00	.00	.0	2.0	15.6109	15.6109	4
14	WEST	-2.50	.00	.0	2.0	13.9220	13.9220	6
15	WEST	-3.00	.00	.0	2.0	12.3342	12.3342	8
16	WEST	-4.00	.00	.0	2.0	9.7513	9.7513	11
17	WEST	-5.00	.00	.0	2.0	7.8982	7.8982	14

HOUR	THETA (DEG)	SPEED (M/S)	MIXING HEIGHT(M)	TEMP (K)	STABILITY CLASS
43	90.00	5.00	300.00	298.00	5

FINAL HT (M) 49.91

DIST FIN HT (KM) .230

0	RECEPTOR NO.	NAME	EAST COORD	NORTH COORD	RECEPTOR HT ABV GRD (M)	RECEPTOR GRD-LVL ELEV (USER HT UNITS)	TOTAL FROM SIGNIF POINT SOURCES	TOTAL FROM ALL SOURCES	CONCENTRATION RANK
	1	WEST	-.10	.00	.0	2.0	15.0669	15.0669	4
	2	WEST	-.20	.00	.0	2.0	5.0307	5.0307	17
	3	WEST	-.30	.00	.0	2.0	5.2982	5.2982	16
	4	WEST	-.40	.00	.0	2.0	7.0822	7.0822	14
	5	WEST	-.50	.00	.0	2.0	8.9792	8.9792	12
	6	WEST	-.60	.00	.0	2.0	10.8211	10.8211	11
	7	WEST	-.70	.00	.0	2.0	12.4784	12.4784	8
	8	WEST	-.80	.00	.0	2.0	13.8735	13.8735	7
	9	WEST	-.90	.00	.0	2.0	14.9768	14.9768	5
	10	WEST	-1.00	.00	.0	2.0	15.7926	15.7926	3
	11	WEST	-1.20	.00	.0	2.0	16.1510	16.1510	1
	12	WEST	-1.50	.00	.0	2.0	15.8251	15.8251	2
	13	WEST	-2.00	.00	.0	2.0	14.2877	14.2877	6
	14	WEST	-2.50	.00	.0	2.0	12.4523	12.4523	9
	15	WEST	-3.00	.00	.0	2.0	10.8485	10.8485	10
	16	WEST	-4.00	.00	.0	2.0	8.3851	8.3851	13
	17	WEST	-5.00	.00	.0	2.0	6.7050	6.7050	15

HOUR	THETA (DEG)	SPEED (M/S)	MIXING HEIGHT(M)	TEMP (K)	STABILITY CLASS
44	90.00	1.00	300.00	298.00	6

FINAL HT (M) 60.69

DIST FIN HT (KM) .061

0	RECEPTOR NO.	NAME	EAST COORD	NORTH COORD	RECEPTOR HT ABV GRD (M)	RECEPTOR GRD-LVL ELEV (USER HT UNITS)	TOTAL FROM SIGNIF POINT SOURCES	TOTAL FROM ALL SOURCES	CONCENTRATION RANK
	1	WEST	-.10	.00	.0	2.0	2.8626	2.8626	17
	2	WEST	-.20	.00	.0	2.0	3.2983	3.2983	16
	3	WEST	-.30	.00	.0	2.0	3.8770	3.8770	15
	4	WEST	-.40	.00	.0	2.0	4.6148	4.6148	14
	5	WEST	-.50	.00	.0	2.0	5.5165	5.5165	13
	6	WEST	-.60	.00	.0	2.0	6.5800	6.5800	12
	7	WEST	-.70	.00	.0	2.0	7.7942	7.7942	11
	8	WEST	-.80	.00	.0	2.0	8.8526	8.8526	10
	9	WEST	-.90	.00	.0	2.0	9.9493	9.9493	9
	10	WEST	-1.00	.00	.0	2.0	11.0669	11.0669	8
	11	WEST	-1.20	.00	.0	2.0	12.9745	12.9745	7
	12	WEST	-1.50	.00	.0	2.0	15.5813	15.5813	6
	13	WEST	-2.00	.00	.0	2.0	18.9527	18.9527	4
	14	WEST	-2.50	.00	.0	2.0	20.2620	20.2620	2
	15	WEST	-3.00	.00	.0	2.0	20.8124	20.8124	1
	16	WEST	-4.00	.00	.0	2.0	19.9223	19.9223	3
	17	WEST	-5.00	.00	.0	2.0	18.6075	18.6075	5

HOUR	THETA (DEG)	SPEED (M/S)	MIXING HEIGHT(M)	TEMP (K)	STABILITY CLASS
45	90.00	1.50	300.00	298.00	6

FINAL HT (M) 60.69

DIST FIN HT (KM) .061

0	RECEPTOR NO.	NAME	EAST COORD	NORTH COORD	RECEPTOR HT ABV GRD (M)	RECEPTOR GRD-LVL ELEV (USER HT UNITS)	TOTAL FROM SIGNIF POINT SOURCES	TOTAL FROM ALL SOURCES	CONCENTRATION RANK
	1	WEST	-.10	.00	.0	2.0	2.8626	2.8626	17
	2	WEST	-.20	.00	.0	2.0	3.2983	3.2983	16
	3	WEST	-.30	.00	.0	2.0	3.8770	3.8770	15
	4	WEST	-.40	.00	.0	2.0	4.6148	4.6148	14
	5	WEST	-.50	.00	.0	2.0	5.5165	5.5165	13
	6	WEST	-.60	.00	.0	2.0	6.5800	6.5800	12
	7	WEST	-.70	.00	.0	2.0	7.7942	7.7942	11
	8	WEST	-.80	.00	.0	2.0	8.8526	8.8526	10
	9	WEST	-.90	.00	.0	2.0	9.9493	9.9493	9
	10	WEST	-1.00	.00	.0	2.0	11.0669	11.0669	8
	11	WEST	-1.20	.00	.0	2.0	12.9745	12.9745	7
	12	WEST	-1.50	.00	.0	2.0	15.5813	15.5813	6
	13	WEST	-2.00	.00	.0	2.0	18.9527	18.9527	4
	14	WEST	-2.50	.00	.0	2.0	20.2620	20.2620	2
	15	WEST	-3.00	.00	.0	2.0	20.8124	20.8124	1
	16	WEST	-4.00	.00	.0	2.0	19.9223	19.9223	3
	17	WEST	-5.00	.00	.0	2.0	18.6075	18.6075	5

HOUR	THETA (DEG)	SPEED (M/S)	MIXING HEIGHT(M)	TEMP (K)	STABILITY CLASS
46	90.00	2.00	300.00	298.00	6

FINAL HT (M) 60.69

DIST FIN HT (KM) .061

0	RECEPTOR NO.	NAME	EAST COORD	NORTH COORD	RECEPTOR HT ABV GRD (M)	RECEPTOR GRD-LVL ELEV (USER HT UNITS)	TOTAL FROM SIGNIF POINT SOURCES	TOTAL FROM ALL SOURCES	CONCENTRATION RANK
	1	WEST	-.10	.00	.0	2.0	2.8626	2.8626	17
	2	WEST	-.20	.00	.0	2.0	3.2983	3.2983	16
	3	WEST	-.30	.00	.0	2.0	3.8770	3.8770	15
	4	WEST	-.40	.00	.0	2.0	4.6148	4.6148	14
	5	WEST	-.50	.00	.0	2.0	5.5165	5.5165	13
	6	WEST	-.60	.00	.0	2.0	6.5800	6.5800	12
	7	WEST	-.70	.00	.0	2.0	7.7942	7.7942	11
	8	WEST	-.80	.00	.0	2.0	8.8526	8.8526	10
	9	WEST	-.90	.00	.0	2.0	9.9493	9.9493	9
	10	WEST	-1.00	.00	.0	2.0	11.0669	11.0669	8
	11	WEST	-1.20	.00	.0	2.0	12.9745	12.9745	7
	12	WEST	-1.50	.00	.0	2.0	15.5813	15.5813	6
	13	WEST	-2.00	.00	.0	2.0	18.9527	18.9527	4
	14	WEST	-2.50	.00	.0	2.0	20.2620	20.2620	2
	15	WEST	-3.00	.00	.0	2.0	20.8124	20.8124	1
	16	WEST	-4.00	.00	.0	2.0	19.9223	19.9223	3
	17	WEST	-5.00	.00	.0	2.0	18.6075	18.6075	5

HOUR	THETA (DEG)	SPEED (M/S)	MIXING HEIGHT(M)	TEMP (K)	STABILITY CLASS
47	90.00	2.50	300.00	298.00	6

FINAL HT (M) 60.09

DIST FIN HT (KM) .063

0 RECEPTOR NO.	NAME	EAST COORD	NORTH COORD	RECEPTOR HT ABV GRD (M)	RECEPTOR GRD-LVL ELEV (USER HT UNITS)	TOTAL FROM SIGNIF POINT SOURCES	TOTAL FROM ALL SOURCES	CONCENTRATION RANK
1	WEST	-.10	.00	.0	2.0	2.8376	2.8376	17
2	WEST	-.20	.00	.0	2.0	3.2786	3.2786	16
3	WEST	-.30	.00	.0	2.0	3.8653	3.8653	15
4	WEST	-.40	.00	.0	2.0	4.6142	4.6142	14
5	WEST	-.50	.00	.0	2.0	5.5300	5.5300	13
6	WEST	-.60	.00	.0	2.0	6.6101	6.6101	12
7	WEST	-.70	.00	.0	2.0	7.8422	7.8422	11
8	WEST	-.80	.00	.0	2.0	8.9149	8.9149	10
9	WEST	-.90	.00	.0	2.0	10.0246	10.0246	9
10	WEST	-1.00	.00	.0	2.0	11.1533	11.1533	8
11	WEST	-1.20	.00	.0	2.0	13.0730	13.0730	7
12	WEST	-1.50	.00	.0	2.0	15.6799	15.6799	6
13	WEST	-2.00	.00	.0	2.0	19.0122	19.0122	4
14	WEST	-2.50	.00	.0	2.0	20.2660	20.2660	2
15	WEST	-3.00	.00	.0	2.0	20.7607	20.7607	1
16	WEST	-4.00	.00	.0	2.0	19.7970	19.7970	3
17	WEST	-5.00	.00	.0	2.0	18.4360	18.4360	5

HOUR	THETA (DEG)	SPEED (M/S)	MIXING HEIGHT(M)	TEMP (K)	STABILITY CLASS
48	90.00	3.00	300.00	298.00	6

FINAL HT (M) 55.52

DIST FIN HT (KM) .076

0 RECEPTOR NO.	NAME	EAST COORD	NORTH COORD	RECEPTOR HT ABV GRD (M)	RECEPTOR GRD-LVL ELEV (USER HT UNITS)	TOTAL FROM SIGNIF POINT SOURCES	TOTAL FROM ALL SOURCES	CONCENTRATION RANK
1	WEST	-.10	.00	.0	2.0	3.4561	3.4561	17
2	WEST	-.20	.00	.0	2.0	4.0197	4.0197	16
3	WEST	-.30	.00	.0	2.0	4.7650	4.7650	15
4	WEST	-.40	.00	.0	2.0	5.7096	5.7096	14
5	WEST	-.50	.00	.0	2.0	6.8516	6.8516	13
6	WEST	-.60	.00	.0	2.0	8.1775	8.1775	12
7	WEST	-.70	.00	.0	2.0	9.6605	9.6605	11
8	WEST	-.80	.00	.0	2.0	10.9160	10.9160	10
9	WEST	-.90	.00	.0	2.0	12.1851	12.1851	9
10	WEST	-1.00	.00	.0	2.0	13.4446	13.4446	8
11	WEST	-1.20	.00	.0	2.0	15.4910	15.4910	7
12	WEST	-1.50	.00	.0	2.0	18.0888	18.0888	6
13	WEST	-2.00	.00	.0	2.0	21.0252	21.0252	3
14	WEST	-2.50	.00	.0	2.0	21.7204	21.7204	1
15	WEST	-3.00	.00	.0	2.0	21.6782	21.6782	2
16	WEST	-4.00	.00	.0	2.0	19.9729	19.9729	4
17	WEST	-5.00	.00	.0	2.0	18.1378	18.1378	5

HOUR	THETA (DEG)	SPEED (M/S)	MIXING HEIGHT(M)	TEMP (K)	STABILITY CLASS
49	90.00	4.00	300.00	298.00	6

FINAL HT (M) 49.67

DIST FIN HT (KM) .101

0 RECEPTOR NO.	NAME	EAST COORD	NORTH COORD	RECEPTOR HT ABV GRD (M)	RECEPTOR GRD-LVL ELEV (USER HT UNITS)	TOTAL FROM SIGNIF POINT SOURCES	TOTAL FROM ALL SOURCES	CONCENTRATION RANK
1	WEST	-.10	.00	.0	2.0	4.0493	4.0493	17
2	WEST	-.20	.00	.0	2.0	4.7308	4.7308	16
3	WEST	-.30	.00	.0	2.0	5.7000	5.7000	15
4	WEST	-.40	.00	.0	2.0	6.9201	6.9201	14
5	WEST	-.50	.00	.0	2.0	8.3730	8.3730	13
6	WEST	-.60	.00	.0	2.0	10.0214	10.0214	12
7	WEST	-.70	.00	.0	2.0	11.8109	11.8109	11
8	WEST	-.80	.00	.0	2.0	13.2638	13.2638	10
9	WEST	-.90	.00	.0	2.0	14.6797	14.6797	9
10	WEST	-1.00	.00	.0	2.0	16.0305	16.0305	8
11	WEST	-1.20	.00	.0	2.0	18.0663	18.0663	6
12	WEST	-1.50	.00	.0	2.0	20.3643	20.3643	4
13	WEST	-2.00	.00	.0	2.0	22.3890	22.3890	1
14	WEST	-2.50	.00	.0	2.0	22.2046	22.2046	2
15	WEST	-3.00	.00	.0	2.0	21.4302	21.4302	3
16	WEST	-4.00	.00	.0	2.0	18.8994	18.8994	5
17	WEST	-5.00	.00	.0	2.0	16.6291	16.6291	7

HOUR	THETA (DEG)	SPEED (M/S)	MIXING HEIGHT(M)	TEMP (K)	STABILITY CLASS
50	90.00	5.00	300.00	298.00	6

FINAL HT (M) 46.11

DIST FIN HT (KM) .126

0 RECEPTOR NO.	NAME	EAST COORD	NORTH COORD	RECEPTOR HT ABV GRD (M)	RECEPTOR GRD-LVL ELEV (USER HT UNITS)	TOTAL FROM SIGNIF POINT SOURCES	TOTAL FROM ALL SOURCES	CONCENTRATION RANK
1	WEST	-.10	.00	.0	2.0	5.9718	5.9718	15
2	WEST	-.20	.00	.0	2.0	4.7221	4.7221	17
3	WEST	-.30	.00	.0	2.0	5.8132	5.8132	16
4	WEST	-.40	.00	.0	2.0	7.1871	7.1871	14
5	WEST	-.50	.00	.0	2.0	8.8107	8.8107	13
6	WEST	-.60	.00	.0	2.0	10.6256	10.6256	12
7	WEST	-.70	.00	.0	2.0	12.5555	12.5555	11
8	WEST	-.80	.00	.0	2.0	14.0790	14.0790	10
9	WEST	-.90	.00	.0	2.0	15.5238	15.5238	8
10	WEST	-1.00	.00	.0	2.0	16.8616	16.8616	7
11	WEST	-1.20	.00	.0	2.0	18.7634	18.7634	5
12	WEST	-1.50	.00	.0	2.0	20.7042	20.7042	3
13	WEST	-2.00	.00	.0	2.0	21.9990	21.9990	1
14	WEST	-2.50	.00	.0	2.0	21.2808	21.2808	2
15	WEST	-3.00	.00	.0	2.0	20.1253	20.1253	4
16	WEST	-4.00	.00	.0	2.0	17.2887	17.2887	6
17	WEST	-5.00	.00	.0	2.0	14.9294	14.9294	9

Appendix D

COMPLEX I CALCULATIONS - H2S

Appendix D

COMPLEX I H2S CALCULATIONS

1. DRILLING

Assume stability class F and 2.5 m/s wind speed.

Assume plume impact on elevated terrain.

From MPTER printout, final plume height = 54 m (see hour 47, page A-26).

Terrain slope in project area rises about 30 m per kilometer to the northwest (see Figure 2). Thus, plume will impact at a distance of about 1.8 km.

If the following is true:

- Receptor on plume centerline (y = 0)
- Mixing height is large with respect to sigma-z (mixing height irrelevant for stable conditions)
- Standard conditions of pressure and temperature
- Infinite half-life

Then the Valley/Complex I equation reduces to (full equation given in Ref. 8):

$$C = (2.03 * 10^6)\ Q\ \{\exp[-0.5(\ H\ /\ sz)^2]\}\ /\ (sz * u * x)$$

where,

C = concentration (ug/m^3)

Q = emission rate (g/s)

H = plume height (m)

sz = sigma-z (m)

u = wind speed (m/s)

x = downwind distance (m)

From Turner [Ref. 7], sz = 20 m for class F stability at a downwind distance of 1.8 km. Plume height, H, is assumed to

be 10 m for plume impact. The emission rate, Q, for drilling is 1.07 g/s.

Hence, for drilling, maximum plume impact concentration is:

$$C = 2.03 * 10^6 * 1.07 \{\exp[-0.5(10 / 20)^2]\} / (20 * 2.5 * 1800)$$

$$C = 21.3 \text{ ug/m}^3 \quad \text{(plus background)}$$

2. VENTING

Venting will be done during daytime only with wind speeds less than 8 m/s. Stability classes A - D may occur during daytime. Class D is worst case for plume impact on elevated terrain. Final plume rise occurs very near source.

From MPTER printout for venting (see Appendix B):

Wind Speed (m/s)	Plume Height (m)
2.0	198
2.5	159
3.0	133
4.0	101
5.0	81
7.0	59
8.0	52

Assume plume loses 1/2 of its height over elevated terrain. Based on slope of terrain (30 m rise per 1000 m run), nearest plume will encounter high terrain is:

Wind Speed (m/s)	1/2 Plume Height (m)	Downwind Distance (m)
2.0	99	3300
2.5	80	2670
3.0	66	2200
4.0	50	1670
5.0	40	1330
7.0	30	1000
8.0	26	870

From Turner [Ref. 7], sigma-z for class D stability is:

Downwind Distance (m)	Sigma-z (m)
3300	70
2670	60
2200	54
1670	44
1330	38
1000	32
870	28

Turner [Ref. 7] states that no effect from mixing height can be assumed when sigma-z is less than 47 percent of the mixing height. Worst-case mixing height is assumed to be 300 m. Since 47 percent of 300 m = 141 m, mixing height will not affect computations (largest sigma-z is 70 m). Valley/Complex I algorithm reduces to the equation given above for drilling. Using Valley/Complex I equation with venting emission rate (18.1 g/s):

u (m/s)	sz (m)	x (m)	H (m)	C (ug/m^3)
2.0	70	3300	99	29.2
2.5	60	2670	80	37.7
3.0	54	2200	66	48.8
4.0	44	1670	50	66.5
5.0	38	1330	40	83.6
7.0	32	1000	30	105.7
8.0	28	870	26	122.5

Background concentration must be added to C above to obtain total concentration.

3. TESTING

Assume stability class F and 2.5 m/s wind speed.

Assume plume impact on elevated terrain.

From MPTER printout, final plume height = 60 m (see hour 47, page C-26).

Terrain slope in project area rises about 30 m per kilometer to the northwest (see Figure 2). Thus, plume will impact at a distance of about 2.0 km.

From Turner [Ref. 7], sz = 22 m for class F stability at a downwind distance of 2.0 km. Plume height, H, is assumed to

be 10 m for plume impact. The emission rate, Q, for flow testing is 1.07 g/s.

Hence, for flow testing, maximum plume impact concentration is:

$$C = 2.03 * 10^6 * 1.07 \{\exp[-0.5(10 / 22)^2]\} / (22 * 2.5 * 2000)$$

$$C = 17.8 \text{ ug/m}^3 \quad \text{(plus background)}$$

Appendix E

PARTICULATE CALCULATIONS

Appendix E

PARTICULATE CALCULATIONS

1. DRILLING

Emission rate (Q) = 2.5 g/s (total particulate)

1.1 Total Suspended Particulate

Particles greater than about 100 um diameter will fall out a short distance from source. Particles smaller than about 30 um will remain suspended indefinetly.

Estimated mass fraction < 100 um = 60%. Assume this pertains to total suspended particulate (TSP).

Q_{TSP} = 2.5 g/s (0.60) = 1.5 g/s

Assume no deposition of TSP. Estimate worst-case 1-hour concentration by multiplying predicted worst-case H2S concentration increment by ratio of TSP/H2S emission rates. Convert to 24-hour concentration using 0.6 conversion factor [Ref. 4]. Add background concentration. Background estimated to be 40 ug/m^3 based on state monitoring data [Ref. 9].

H2S emission rate = 1.07 g/s

On-site:

Worst-case H2S concentration increment = 412 ug/m^3

C_{TSP} = (412) (1.5 / 1.07) (0.6) = 346 ug/m^3

C_{TSP} = 346 + 40 = 386 ug/m^3

Off-site:

Worst-case H2S concentration increment = 24 ug/m^3

C_{TSP} = (24) (1.5 / 1.07) (0.6) = 20 ug/m^3

C_{TSP} = 20 + 40 = 60 ug/m^3

1.2 PM-10

Estimated mass fraction < 10 um = 30%

Q_{PM10} = 2.5 g/s (0.30) = 0.75 g/s

Assume no deposition of PM-10. Estimate worst-case 24-hour PM-10 concentration by multiplying predicted worst-case 24-hour TSP concentration increment by ratio of PM10/TSP emission rates. Add background concentration. Background estimated to be 20 ug/m^3 based on state monitoring data [Ref. 9].

On-site:

C_{PM10} = (346) (0.75 / 1.5) = 173 ug/m^3

C_{PM10} = 173 + 20 = 193 ug/m^3

Off-site:

C_{PM10} = (20) (0.75 / 1.5) = 10 ug/m^3

C_{PM10} = 10 + 20 = 30 ug/m^3

2. VENTING

Emission rate (Q) = 278 g/s (total particulate)

2.1 Total Suspended Particulate

Particles greater than about 100 um diameter will fall out a short distance from source. Particles smaller than about 30 um will remain suspended indefinetly. Due to high exit velocity, much of emission will consist of very large particles that will be deposited near the source.

Estimated mass fraction < 100 um = 40%. This percentage will in reality probably be much smaller. Assume this pertains to total suspended particulate (TSP).

Q_{TSP} = 278 g/s (0.40) = 111 g/s

Assume no deposition of TSP. Estimate worst-case 1-hour concentration by multiplying predicted worst-case H2S concentration increment by ratio of TSP/H2S emission rates. Convert to 24-hour concentration using 0.6 conversion factor [Ref. 4]. Assume venting will be done only 4 hours per day;

multiply by a factor of 4/24. Add background concentration. Background estimated to be 40 ug/m^3 based on state monitoring data [Ref. 9].

H2S emission rate = 18.1 g/s

On-site:

Worst-case H2S concentration increment = 155 ug/m^3

C_{TSP} = (155) (111 / 18.1) (0.6) (4 / 24) = 95 ug/m^3

C_{TSP} = 95 + 40 = 135 ug/m^3

Off-site:

Worst-case H2S concentration increment = 122 ug/m^3

C_{TSP} = (122) (111 / 18.1) (0.6) (4 / 24) = 75 ug/m^3

C_{TSP} = 75 + 40 = 115 ug/m^3

2.2 PM-10

Estimated mass fraction < 10 um = 20%

Q_{PM10} = 278 g/s (0.20) = 55.6 g/s

Assume no deposition of PM-10. Estimate worst-case 24-hour PM-10 concentration by multiplying predicted worst-case 24-hour TSP concentration increment by ratio of PM10/TSP emission rates. Add background concentration. Background estimated to be 20 ug/m^3 based on state monitoring data [Ref. 9].

On-site:

C_{PM10} = (95) (55.6 / 111) = 48 ug/m^3

C_{PM10} = 48 + 20 = 68 ug/m^3

Off-site:

C_{PM10} = (75) (55.6 / 111) = 38 ug/m^3

C_{PM10} = 38 + 20 = 58 ug/m^3

Appendix F

TRACE ELEMENT CALCULATIONS

Appendix F

TRACE ELEMENT CALCULATIONS

Estimate trace element concentrations by first calculating the trace element emission rate based on the upper range limit of the dissolved solids concentration of the material in the brine and the maximum brine flow rate during venting (50 t/hr). Use HGP-A data to estimate brine concentrations of trace elements (see Ref. 1). Then, calculate concentration at the stack using the exhaust gas flow rate (21.1 m^3/s). Next, calculate worst-case 24-hour concentration at ground-level by multiplying worst-case 1-hour H2S concentration increment (122 ug/m^3 offsite) by ratio of trace element/H2S emission rate and then by 0.6 1-hour to 24-hour EPA conversion factor. Assume venting 4 hours per day. Assume 40 percent of material is in droplets larger than 100 um diameter and falls out very near source (percentage fallout will likely be much higher).

1. AMMONIA

$Q = (50\ t/hr)\ (1\ hr / 3600\ s)\ (10^6\ g/t)\ (0.05\ ppmw)\ (10^{-6})$

$Q = 0.00069\ g/s$

$C_{stack} = (0.00069\ g/s)\ (1000\ mg/g) / (21.1\ m^3/s)$

$C_{stack} = 0.033\ mg/m^3$

$C_{ambient} = (122\ ug/m^3)\ (0.00069 / 18.1)\ (0.6)\ (4 / 24)\ (0.6)$

$C_{ambient} = 0.00028\ ug/m^3 = 0.00000028\ mg/m^3$

2. ARSENIC

$Q = (50\ t/hr)\ (1\ hr / 3600\ s)\ (10^6\ g/t)\ (0.4\ ppmw)\ (10^{-6})$

$Q = 0.0056\ g/s$

$C_{stack} = (0.0056\ g/s)\ (1000\ mg/g) / (21.1\ m^3/s)$

$C_{stack} = 0.26\ mg/m^3$

$C_{ambient} = (122\ ug/m^3)\ (0.0056 / 18.1)\ (0.6)\ (4 / 24)\ (0.6)$

$C_{ambient} = 0.0023\ ug/m^3 = 0.0000023\ mg/m^3$

3. BORON

$Q = (50\ t/hr)\ (1\ hr / 3600\ s)\ (10^6\ g/t)\ (11\ ppmw)\ (10^{-6})$

$Q = 0.15\ g/s$

$C_{stack} = (0.15\ g/s)\ (1000\ mg/g) / (21.1\ m^3/s)$

$C_{stack} = 7.1\ mg/m^3$

$C_{ambient} = (122\ ug/m^3)\ (0.15 / 18.1)\ (0.6)\ (4 / 24)\ (0.6)$

$C_{ambient} = 0.061\ ug/m^3 = 0.000061\ mg/m^3$

4. BROMIDE

$Q = (50\ t/hr)\ (1\ hr / 3600\ s)\ (10^6\ g/t)\ (80\ ppmw)\ (10^{-6})$

$Q = 1.1\ g/s$

$C_{stack} = (1.1\ g/s)\ (1000\ mg/g) / (21.1\ m^3/s)$

$C_{stack} = 52\ mg/m^3$

$C_{ambient} = (122\ ug/m^3)\ (1.1 / 18.1)\ (0.6)\ (4 / 24)\ (0.6)$

$C_{ambient} = 0.44\ ug/m^3 = 0.00044\ mg/m^3$

5. CALCIUM

$Q = (50\ t/hr)\ (1\ hr / 3600\ s)\ (10^6\ g/t)\ (920\ ppmw)\ (10^{-6})$

$Q = 13\ g/s$

$C_{stack} = (13\ g/s)\ (1000\ mg/g) / (21.1\ m^3/s)$

$C_{stack} = 616\ mg/m^3$

$C_{ambient} = (122\ ug/m^3)\ (13 / 18.1)\ (0.6)\ (4 / 24)\ (0.6)$

$C_{ambient} = 5.2\ ug/m^3 = 0.0052\ mg/m^3$

6. CHLORIDE

$Q = (50\ t/hr)\ (1\ hr / 3600\ s)\ (10^6\ g/t)\ (10{,}000\ ppmw)\ (10^{-6})$

$Q = 139\ g/s$

$C_{stack} = (139\ g/s)\ (1000\ mg/g) / (21.1\ m^3/s)$

$C_{stack} = 6588\ mg/m^3$

$C_{ambient} = (122\ ug/m^3)\ (139 / 18.1)\ (0.6)\ (4 / 24)\ (0.6)$

$C_{ambient} = 56\ ug/m^3 = 0.056\ mg/m^3$

7. FLUORIDE

$Q = (50\ t/hr)\ (1\ hr / 3600\ s)\ (10^6\ g/t)\ (0.9\ ppmw)\ (10^{-6})$

$Q = 0.012\ g/s$

$C_{stack} = (0.012\ g/s)\ (1000\ mg/g) / (21.1\ m^3/s)$

$C_{stack} = 0.57\ mg/m^3$

$C_{ambient} = (122\ ug/m^3)\ (0.012 / 18.1)\ (0.6)\ (4 / 24)\ (0.6)$

$C_{ambient} = 0.0048\ ug/m^3 = 0.0000048\ mg/m^3$

8. IODIDE

$Q = (50\ t/hr)\ (1\ hr / 3600\ s)\ (10^6\ g/t)\ (20\ ppmw)\ (10^{-6})$

$Q = 0.28\ g/s$

$C_{stack} = (0.28\ g/s)\ (1000\ mg/g) / (21.1\ m^3/s)$

$C_{stack} = 13.3\ mg/m^3$

$C_{ambient} = (122\ ug/m^3)\ (0.28 / 18.1)\ (0.6)\ (4 / 24)\ (0.6)$

$C_{ambient} = 0.11\ ug/m^3 = 0.00011\ mg/m^3$

9. IRON

$Q = (50\ t/hr)\ (1\ hr / 3600\ s)\ (10^6\ g/t)\ (8.4\ ppmw)\ (10^{-6})$

$Q = 0.12\ g/s$

$C_{stack} = (0.12\ g/s)\ (1000\ mg/g) / (21.1\ m^3/s)$

$C_{stack} = 5.7\ mg/m^3$

$C_{ambient} = (122\ ug/m^3)\ (0.12 / 18.1)\ (0.6)\ (4 / 24)\ (0.6)$

$C_{ambient} = 0.048\ ug/m^3 = 0.000048\ mg/m^3$

10. LITHIUM

$Q = (50\ t/hr)\ (1\ hr / 3600\ s)\ (10^6\ g/t)\ (9\ ppmw)\ (10^{-6})$

$Q = 0.12\ g/s$

$C_{stack} = (0.12\ g/s)\ (1000\ mg/g) / (21.1\ m^3/s)$

$C_{stack} = 5.7\ mg/m^3$

$C_{ambient} = (122\ ug/m^3)\ (0.12 / 18.1)\ (0.6)\ (4 / 24)\ (0.6)$

$C_{ambient} = 0.048\ ug/m^3 = 0.000048\ mg/m^3$

11. MAGNESIUM

$Q = (50\ t/hr)\ (1\ hr / 3600\ s)\ (10^6\ g/t)\ (2\ ppmw)\ (10^{-6})$

$Q = 0.028\ g/s$

$C_{stack} = (0.028\ g/s)\ (1000\ mg/g) / (21.1\ m^3/s)$

$C_{stack} = 1.3\ mg/m^3$

$C_{ambient} = (122\ ug/m^3)\ (0.028 / 18.1)\ (0.6)\ (4 / 24)\ (0.6)$

$C_{ambient} = 0.011\ ug/m^3 = 0.000011\ mg/m^3$

12. MANGANESE

$Q = (50\ t/hr)\ (1\ hr / 3600\ s)\ (10^6\ g/t)\ (8.5\ ppmw)\ (10^{-6})$

$Q = 0.12\ g/s$

$C_{stack} = (0.12\ g/s)\ (1000\ mg/g) / (21.1\ m^3/s)$

$C_{stack} = 5.7\ mg/m^3$

$C_{ambient} = (122\ ug/m^3)\ (0.12 / 18.1)\ (0.6)\ (4 / 24)\ (0.6)$

$C_{ambient} = 0.048\ ug/m^3 = 0.000048\ mg/m^3$

13. MERCURY

$Q = (50\ t/hr)\ (1\ hr / 3600\ s)\ (10^6\ g/t)\ (0.05\ ppmw)\ (10^{-6})$

$Q = 0.00069\ g/s$

$C_{stack} = (0.00069\ g/s)\ (1000\ mg/g) / (21.1\ m^3/s)$

$C_{stack} = 0.033\ mg/m^3$

$C_{ambient} = (122\ ug/m^3)\ (0.00069 / 18.1)\ (0.6)\ (4 / 24)\ (0.6)$

$C_{ambient} = 0.00028\ ug/m^3 = 0.00000028\ mg/m^3$

14. POTASSIUM

$Q = (50\ t/hr)\ (1\ hr / 3600\ s)\ (10^6\ g/t)\ (2700\ ppmw)\ (10^{-6})$

$Q = 38\ g/s$

$C_{stack} = (38\ g/s)\ (1000\ mg/g) / (21.1\ m^3/s)$

$C_{stack} = 1800\ mg/m^3$

$C_{ambient} = (122\ ug/m^3)\ (38 / 18.1)\ (0.6)\ (4 / 24)\ (0.6)$

$C_{ambient} = 15\ ug/m^3 = 0.015\ mg/m^3$

15. SILICA

$Q = (50\ t/hr)\ (1\ hr / 3600\ s)\ (10^6\ g/t)\ (1500\ ppmw)\ (10^{-6})$

$Q = 21\ g/s$

$C_{stack} = (21\ g/s)\ (1000\ mg/g) / (21.1\ m^3/s)$

$C_{stack} = 995\ mg/m^3$

$C_{ambient} = (122\ ug/m^3)\ (21 / 18.1)\ (0.6)\ (4 / 24)\ (0.6)$

$C_{ambient} = 8.5\ ug/m^3 = 0.0085\ mg/m^3$

16. SODIUM

$Q = (50\ t/hr)\ (1\ hr / 3600\ s)\ (10^6\ g/t)\ (10{,}000\ ppmw)\ (10^{-6})$

$Q = 139\ g/s$

$C_{stack} = (139\ g/s)\ (1000\ mg/g) / (21.1\ m^3/s)$

$C_{stack} = 6588\ mg/m^3$

$C_{ambient} = (122\ ug/m^3)\ (139 / 18.1)\ (0.6)\ (4 / 24)\ (0.6)$

$C_{ambient} = 56\ ug/m^3 = 0.056\ mg/m^3$

17. SULFATE

$Q = (50\ t/hr)\ (1\ hr / 3600\ s)\ (10^6\ g/t)\ (24\ ppmw)\ (10^{-6})$

$Q = 0.33\ g/s$

$C_{stack} = (0.33\ g/s)\ (1000\ mg/g) / (21.1\ m^3/s)$

$C_{stack} = 16\ mg/m^3$

$C_{ambient} = (122\ ug/m^3)\ (0.33 / 18.1)\ (0.6)\ (4 / 24)\ (0.6)$

$C_{ambient} = 0.13\ ug/m^3 = 0.00013\ mg/m^3$